

Developer's Assessment Report Jay Project Appendix 1E, Commitments Table October 2014

APPENDIX 1E

COMMITMENTS TABLE



Section of the DAR	Commitment Description	Subject/Component
1	Introduction	
1.2.1 Corporate History	Dominion Diamond is fully committed to maintaining and advancing the principles and practices of sustainable development, while making best use of the resources mined. This commitment includes respect for the natural and social environments, sharing economic benefits, and diligently reducing adverse effects or outcomes resulting from mining. Dominion Diamond maintains a high standard of environmental stewardship throughout all phases of its operations. The Ekati Mine meets its environmental protection commitments through its Sustainable Development Policy and its comprehensive environmental management system, which is International Organization for Standardization (ISO) accredited (ISO14001:2004 certified).	Management
1.2.3 Corporate and Social Responsibility	The Ekati Mine has also made commitments to responsible Northern resource development and community development. These commitments are expressed through Impact Benefit Agreements with Aboriginal communities, and a Socio-Economic Agreement with the GNWT.	Management
1.2.3.1.1 Environmental Agreement	The Environmental Agreement also documents a range of guiding principles for work to be undertaken under the Environmental Agreement. These principles include adaptive management, full consideration of traditional knowledge (TK), and the precautionary principle. In the context of this report, precautionary is defined as "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing reasonable measures to prevent environmental degradation" (MVLWB 2011a).	Management
1.2.3.2.9 Archaeology Monitoring Program/ Archaeology Management Plan	The Archaeology Monitoring Program and Archaeology Management Plan will be reviewed for the Jay Project and updated to incorporate the Jay Project if necessary during the regulatory processes following completion of the EA process.	Monitoring / Management
1.2.3.2.11 Interim Closure and Reclamation Plan	As a stipulation of the Water Licence and Environmental Agreement, an Interim Closure and Reclamation Plan (ICRP) has been developed with input from regulators, Aboriginal people, and stakeholders in the Project (WLWB 2014). The ICRP incorporates reclamation activities and objectives that describe how reclamation will be completed and documents the performance standards to be met at closure. The Ekati Mine ICRP is an all-inclusive plan that addresses all reclamation obligations at the Ekati Mine, and which was approved by the WLWB in 2011. Annual reclamation progress and ICRP updates are reported to the WLWB annually.	Monitoring/ Management
1.2.3.2.11 Interim Closure and Reclamation Plan	The ICRP would be expanded to incorporate the Jay Project during the Water Licence issuance processes following Environmental Assessment. The plan for future reclamation research would be reviewed at that time and updated as necessary to reflect the Jay Project.	Management / Reclamation
1.2.3.3 Corporate Policies	Our various corporate policies, codes of practice, plans, and commitments are written to ensure directors, officers, and employees (collectively "employees") of Dominion Diamond Corporation and its subsidiary and affiliated companies understand the importance placed on governance and ethical conduct overall. Similarly, it helps our security holders, customers, suppliers, and competitors know what to expect from the Company.	Management
1.2.3.3.2 Sustainable Development	Dominion Diamond is committed to operating in a sustainable manner and with the utmost integrity to enhance the positive economic, environmental, and social impacts of its business while maximizing the resources it mines. This commitment is guided by the principles of social responsibility, environmental stewardship, and economic sustainability.	Environmental Management/ Sustainable Development
	Our Sustainable Development Policy (Appendix 1C) aligns with the two international standards, ISO 14001 and the Occupational Health and Safety Assessment Series (OHSAS) 18001, as well as expectations defined in the Towards Sustainable Mining initiative published by the Mining Association of Canada (MAC). As a member of MAC, the Company is committed to following MAC policies and programs.	
1.2.3.3.3 Environmental and Social Responsibility	Dominion Diamond's Sustainable Development Policy governs how the business is run in terms of Environmental and Social Responsibility by confirming the commitment to Zero Harm to employees and people of the North, protection of the environment, continuous improvement, compliance with laws and regulations, community engagement, and respect.	Health and Safety/Management
1.2.3.3.5 Health and Safety	At Dominion Diamond, we believe people are our most important asset. That is why we are fully committed to the health, safety, and well-being of our employees, and to establishing strong, lasting, and respectful relationships with the people and communities with whom we work.	Health and Safety/Management
1.2.4 Performance Record	Environmental performance has been a focus for the Ekati Mine since operations began in 1998. For the first 16 years of operation and continuing through the current plan to extend mine life extension, Dominion Diamond will continue to maintain this focus. Experiences during operations have provided positive opportunities for lessons learned.	Health and Safety/Management
	Dominion Diamond's Sustainable Development Policy (Appendix 1C) outlines our commitment to Zero Harm to people, protection of the environment, continuous improvement, compliance to laws and regulations, and community engagement and respect. Dominion Diamond has recently developed an integrated Health, Safety and Environment Management system around these principles and to meet the requirements under ISO 14001 of which we are certified and OHSAS 18001 of which we will be going through the certification process this fall.	
1.2.4.1 Trends in Hydraulic Spills During Operations	Based on the data evaluation, the volume of each individual spill is consistent with and the number of spills is proportional to the number of pieces of heavy equipment in use around the Ekati Mine. These observations suggest that the number of spills may again increase from current levels during construction of the Jay Project when the number of pieces of heavy equipment in use at the Ekati Mine will increase. Dominion Diamond will look to build on this preliminary evaluation to identify improvements/modifications to spill prevention mechanisms that are currently in place. This operational optimization is anticipated to be pursued through current operations programs and, if necessary, regulatory permitting of the Jay Project after completion of environmental assessment.	Environmental Management
1.3.3.2 The Future of the Ekati Mine	The Project will maintain benefits flowing from the Ekati Mine for 10 or more additional years (i.e., to at least 2029) based only on open-pit mining. Underground mining of the deeper portions of the Jay pipe would extend mine life further into the future.	Socio-economics
1.4.1.3 Jay Project Regulatory Process	Most of the facilities and activities related to mining of the Jay pipe have already been subject to EA and approval. For example, new processing facilities, processed kimberlite containment facilities, or camp facilities are not required as part of the Project. There are no newly proposed mining methods associated with this application; the socio-economic benefits of the Ekati Mine will be extended 10 or more years with Project approval.	Monitoring /Environmental Management / Engagement
	The instruments of environmental management and monitoring currently in use at the Ekati Mine will be expanded to include all aspects of the Project.	
	Dominion Diamond will be required to engage with regulatory authorities as they complete detailed engineering and other designs for the Project, including plans for mitigation, environmental control features, and the amendment of Ekati Mine monitoring plans.	



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1.4.2.1 Surface Leases	Eight surface leases are currently in place for the existing operations at the Ekati Mine (Map 1.4-1). These leases do not cover the area around Lac du Sauvage where the new development for the Project will occur. Therefore, one or more new surface lease(s) will be sought for the Lac du Sauvage area in conjunction with this Project application as required by the Mackenzie Valley Land Use Regulations.	Permitting
1.4.2.1 Surface Leases, Table 1.4-2	A surface lease will be required for the necessary developments in the Lac du Sauvage area beyond the boundaries of the current surface leases	Permitting
	A Type A Land Use permit will be required for the Jay Project for the open pits and access roads, runoff and water diversion structures, and other activities.	
	A Fisheries Authorization will be required for the dike construction, fish-out, and dewatering of a diked area of Lac du Sauvage, and construction and operation of the Jay Pit.	
1.4.2.4 Fisheries Authorizations	The Project will result in effects to fish and fish habitat through the construction of the dike in Lac du Sauvage, and the dewatering and fish-out within the diked area. An Authorization under the Fisheries Act is being sought to provide for such activities within Lac du Sauvage. Dominion Diamond will continue to work with DFO on the details of the offsetting requirements for the Project.	Fisheries Authorization/ Environmental Management
Section 2	Project Alternatives	
2.2.2.2 Geochemistry	Kimberlite and processed kimberlite have a low potential for acid generation, owing to the abundance of carbonate minerals in these materials. However, they are capable of leaching metals in neutral pH conditions including aluminum, arsenic, copper, nickel, and iron (regional dataset) and cadmium, copper, molybdenum, nickel, selenium, sulphate and silver (Jay pipe dataset). These materials will be handled and stored in accordance to existing management practices at site.	Geochemistry
	The regional dataset indicated that granite may have the potential for leaching metals (aluminum, copper, arsenic, cobalt, and nickel), but samples collected from the Jay pipe had a low metal leaching potential. Granite will be handled, used, and stored in accordance with existing management practices at site.	
	Metasedimentary rock is known to contain trace concentrations of sulphide minerals, with occasional concentrations up to 2% to 5%. Diabase dykes are classified as magnetic or non-magnetic. Diabase dykes contain trace concentrations of sulphide minerals, including pyrite, chalcopyrite, and pyrrhotite, and magnetic diabase dykes contain the iron mineral magnetite. Thus, the metasedimentary rock is classified as potentially acid generating (Annex VIII). Further, this material is capable of leaching metals (aluminum, arsenic, copper, cadmium, iron, nickel, silver and zinc) in neutral and acidic conditions. This material will be handled and stored in accordance with the Jay Project Description, which is consistent with existing management practices at site.	
2.2.2.4 Archaeology/Traditional Land Use	Dominion Diamond recognizes the significance of traditional land use activities and the connections local communities maintain with the Lac de Gras area, and will work with the communities to balance the traditional and present-day land uses so that the cultural connections can be maintained for future generations.	Traditional Land Use
2.5.1.2.3 Environmental Considerations	Areas requiring wildlife crossings will be identified and designed as part of the pre-feasibility engineering design work. A combination of sources will be used to identify the wildlife crossings, including: collared caribou Global Positioning System tracking data, visible evidence of historical caribou tracks, vegetation and landform information, observations, and site experience of Ekati environmental staff, biologists, Traditional Knowledge (where available), and advice obtained from Elders and IBA community members.	Caribou/Wildlife
Section 3	Project Description	
3.2 Project Overview	Coarse processed kimberlite will continue to be stored in the existing waste rock storage areas (WRSAs), while FPK will be deposited in the existing Koala and Panda open pits and associated underground workings. The FPK slurry from the processing plant will be transported via slurry pipelines, as currently conducted at site.	Design
3.2 Project Overview	The design of these facilities and activities uses approaches that have been successfully implemented at the Ekati Mine and other northern mines. The existing Ekati Mine environmental monitoring, management, and mitigation programs will all be expanded to incorporate the activities proposed for the Jay Project. As stated in Section 1, the Project maximizes the use of the existing infrastructure to reduce the environmental footprint.	Design
3.2.1.3 Closure	Reclamation of some existing facilities that have no operational value will proceed during the Project. This will include, for example, Cells A, B, and C of the LLCF. Reclamation of other existing facilities will proceed upon completion of the Project. This will include, for example, the Ekati main camp and processing plant.	Reclamation
3.2.1.3 Closure	Active closure will occur after the completion of mining, and is currently scheduled to take place over four years starting in 2030. This will include removal of site infrastructure and disposal of materials, either on- site or off-site as appropriate. Water will be pumped from the Misery Pit to the bottom of the Jay Pit, and the diked area will be back-flooded with water from Lac du Sauvage. Roads and the Sub-Basin B Diversion Channel will be decommissioned. The Misery, Panda, and Koala pits will be covered with a freshwater cap.	Reclamation
3.2.1.3 Closure	Once monitoring has shown that water quality within the diked area is suitable, the dike will be breached and the isolated portion of Lac du Sauvage will be reconnected. The Misery Pit will be allowed to overflow to Lac de Gras once water quality is suitable.	Environmental Monitoring
3.2.1.3 Closure	Monitoring will continue until it is shown that the site meets all regulatory closure objectives. Version 2.4 of the Ekati Mine Interim Closure and Reclamation Plan (ICRP) was approved by the Wek'èezhi Land and Water Board (WLWB) in November 2011 (BHP Billiton 2011) and is anticipated to be updated to incorporate the Project as part of future regulatory processes.	Environmental Monitoring
3.3.2 Geochemical Conditions	Kimberlite and processed kimberlite have a low potential for acid generation, owing to the abundance of carbonate minerals in these materials. However, they are capable of leaching metals in neutral pH conditions including aluminum, arsenic, copper, nickel, and iron (regional dataset), and cadmium, copper, molybdenum, nickel, selenium, sulphate, and silver (Jay pipe dataset). These materials will be handled and stored as described in this Project Description, which is consistent with existing, approved management practices at the Ekati Mine.	Environmental Management
3.3.2 Geochemical Conditions	Granite will be handled, used, and stored as described in this Project Description, which is consistent with existing, approved management practices at the Ekati Mine.	Environmental Management
3.3.2 Geochemical Conditions	Metasedimentary rock is known to contain trace concentrations of sulphide minerals, with occasional concentrations of 2% to 5%. Diabase dykes are classified as magnetic or non-magnetic. Diabase dykes contain trace concentrations of sulphide minerals, including pyrite, chalcopyrite, and pyrrhotite, and magnetic diabase dykes contain the iron mineral magnetite. Thus, the metasedimentary rock is classified as potentially acid generating (Annex VIII). Further, this material is capable of leaching metals (aluminum, arsenic, copper, cadmium, iron, nickel, silver, and zinc) in neutral and acidic conditions. This material will be handled and stored as described in this Project Description, which is consistent with existing, approved management practices at the Ekati Mine.	Environmental Management
3.4.1.4.3 Lynx Pit	Water quality monitoring conducted for the reclamation program will be completed to verify that in-pit water quality is suitable for release before overflow.	Environmental Monitoring



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3.4.3.7 Wastewater and Processed Kimberlite Management Plan	The WPKMP has been approved by the WLWB, and will be amended to include the relevant information for minewater and FPK management related to the Project. This operational amendment will be addressed as part of the regulatory process subsequent to successful completion of the EA. The DAR will provide the basis for the amendment.	Environmental Management
3.4.3.8 Interim Closure and Reclamation Plan	The ICRP has been approved by the WLWB, and will be amended to include the relevant information and changes resulting from the Project. This amendment will be addressed as part of the regulatory process subsequent to successful completion of the EA. The DAR will provide the basis for the amendment.	Environmental Management
3.4.3.9 Wildlife Management Plan	The Wildlife Management Plan will be amended to include the relevant information and changes resulting from the Project. This amendment will be addressed during the regulatory process subsequent to successful completion of the EA. The DAR will provide the basis for the amendment.	Environmental Management
3.5 Jay Project Components	During construction and operations of these components, appropriate sediment and erosion controls will be undertaken. Other relevant management plans and practices consistent with those used at the Ekati Mine, and as relevant, at other Northern projects, will also be applied. Detailed sediment and erosion control planning will be conducted during detailed design. Runoff and seepage from Project facilities will be managed according to existing Ekati Mine environmental management plans (Section 3.4.3) and the Project Mine Water Management Plan (Appendix 3A).	Environmental Management
3.5.1.5 Roads and Pads	Roads will be constructed of non-PAG waste rock from mining operations (i.e., granite). To protect the permafrost, the surficial organic layer, which includes vegetation and organic soil, will not be stripped. Settlement of the road surface, due to consolidation of the foundation soils, will be managed through routine maintenance. The typical road section will be reviewed at later stages of the design to refine the required thickness of the rockfill based on topography, ground conditions, permafrost protection, and road gradients.	Design / Environmental Management
3.5.1.5 Roads and Pads	At watercourse crossings, cross-drainage structures will be installed to prevent roads from impeding water flows. Where appropriate, culverts will be designed to allow for fish movement. Regular inspections of roads and cross-drainage structures will be performed.	Environmental Monitoring
3.5.1.5 Roads and Pads	During construction and operation of roads, sediment and erosion control measures will be applied. These mitigation measures will be consistent with those used currently at the Ekati Mine, which are based on experience gained over 16 years of operations. More detailed sediment and erosion control planning will be conducted during detailed design. Regular road maintenance is conducted as required throughout the Ekati Mine operation and these current practices would be extended to the new road areas.	Environmental Management
3.5.1.5 Roads and Pads	The portion of the road crossing the esker is designed as a cut through a naturally occurring narrow section. Esker material will be stockpiled and reserved for reclamation of the esker.	Design / Reclamation
3.5.3.1 Jay Dike	The dike will be design to meet criteria as established following local regulations and the Canadian Dam Association's Dam Safety Guidelines (CDA 2007).	Design
3.5.3.1 Jay Dike	Geotechnical instrumentation will be installed within the dike structure and foundation to monitor the performance of the dike during dewatering and operation. The instrumentation will monitor the physical performance of the dike to confirm that the structure is operating according to the design intent. Monitoring with the instrumentation will be continued into refilling and closure, until the dike is breached at closure.	Environmental Monitoring
3.5.3.2 Sub-Basin B Diversion Channel	A design flow with a 1-in-100-year return period, plus a minimum 0.3 m of freeboard, was used to design the diversion channel. This design is considered appropriate to mitigate the risk of pit flooding during extreme seasonal peaks. The design concept for the channel is that it will be lined with riprap underlain by a layer of non-woven geotextile. The channel design will allow for fish movement, and will consider requirements for caribou crossing.	Design
3.5.3.5 Fish-Out	Dominion Diamond will work with Fisheries and Oceans Canada and local Aboriginal communities to develop a fish-out plan for the diked area within Lac du Sauvage. A conceptual fish-out plan has been developed (Appendix 9B). A detailed fish-out plan for the Project will be developed in consultation with Fisheries and Oceans Canada, and with input from communities during the permitting phase of the Project and before the implementation of the fish-out.	Environmental Management
3.5.5.1 Dewatering	A final Dewatering Plan, envisioned to be consistent with the current requirements of the Ekati Mine Water Licence, is anticipated to be a requirement of the Water Licence issued by the WLWB during the regulatory phase of the Project subsequent to successful completion of the environmental assessment review process.	Environmental Management
3.5.5.2.1 Minewater Monitoring and Adaptive Management	Minewater monitoring will be established to monitor the water quantity and quality of main minewater sources. The program's objective is to verify assumptions made during the development of the water quantity and quality models and apply targeted adaptive management strategies where required to meet established performance standards. Data will be collected, compiled, and managed internally by Dominion Diamond and will be reported to the WLWB.	Environmental Monitoring
3.5.5.2.1 Minewater Monitoring and Adaptive Management	Data collected as part of the minewater monitoring program will be used to assess the need for adaptive management should trends in minewater quantity and quality differ from expectations. Adaptive management strategies may involve improvement or modifications of the proposed minewater management plan, or temporary use of the contingency allowances included in the design of the water management facilities. Adaptive management and contingency measures are discussed further in the Mine Water Management Plan (Appendix 3A).	Monitoring/ Environmental Management
3.5.5.2.1 Minewater Monitoring and Adaptive Management	Monitoring will include minewater sources and effluent (through internal programs and expansion of the Water Licence Surveillance Network Program), and receiving environment monitoring (through expansion of the Water Licence Aquatic Effects Monitoring Program). The Ekati Mine Aquatic Response Framework will also be expanded to incorporate the Project to provide a mechanism for ensuring review of monitoring information against pre-defined thresholds, and implementation of adaptive management response actions as appropriate.	Adaptive Management
3.5.6 Waste Rock Storage Area	Monitoring runoff and seepage from the Jay WRSA will be included in the WROMP (Section 3.4.3.1) which is a requirement under the water licence. As a condition of the water licence, annual monitoring and reporting of WRSA seepage quality, and ongoing validation of waste rock geochemical characterization are required.	Environmental Monitoring
3.5.8 Closure and Reclamation	The Ekati Mine ICRP also outlines the reclamation research plans that address key uncertainties related to mine closure, such as water quality, wildlife safety, and sustainability of vegetation cover at the LLCF. A closure monitoring plan will also be in place at the time of closure as a method of observing and tracking the performance of reclamation work against closure criteria to establish if reclamation activities have been successful or if further work is required.	Reclamation
3.5.8 Closure and Reclamation	The Jay Project introduces necessary changes to the Ekati Mine ICRP, primarily the new reclamation activities at Lac du Sauvage, and the amended pit back-flooding approach for the Lynx, Misery, Panda, and Koala open pits. The ICRP will be amended to include these activities. Community and regulatory engagement will continue to be an important component for closure and reclamation planning.	Reclamation
3.5.8.9 Monitoring and Maintenance	Monitoring for physical and chemical stability, and maintenance of the reclaimed facilities will be required after closure and post-closure until closure objectives and criteria are met. The specific schedule and program for monitoring, maintenance, and engagement will be prepared as part of the anticipated amendment of the Ekati Mine ICRP that would take place as part of the regulatory process following completion of the EA.	Reclamation



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3.5.8.9 Monitoring and Maintenance	The environmental monitoring programs developed during operations will be used as the basis for post-closure monitoring. Monitoring of water quality within the previously diked area is anticipated. Monitoring during closure will be designed to track reasonably foreseeable post-closure contamination pathways, and to allow for the identification of any specific post-closure monitoring to address potential effects through adaptive management.	Environmental Monitoring
3A	Mine Water Management Plan	
1.0 Introduction	The MWMP will be reviewed and updated as the Jay Project proceeds into detailed design, construction, operations and closure, and as additional information becomes available from field investigation programmes and monitoring activities.	Engineering
3.1 Definitions	Minewater will need to be managed and monitored prior to discharge to the environment.	Environmental Monitoring
3.4.1.1 Turbidity Management during Dike Construction	Measures will be implemented to monitor and control the areas over which elevated levels of TSS may occur during dike construction.	Environmental Monitoring
3.4.1.1 Turbidity Management during Dike	During the first summer of construction (summer 2016), turbidity curtains will be installed and anchored to islands and spot locations on the lakebed surface.	Mitigation
Construction	During the summer of 2017 and 2018, turbidity curtains will be installed on both sides of the dike within Lac du Sauvage to limit the area potentially impacted by high levels of TSS generated by construction activities:	
3.4.2 Operations Phase	Water quality monitoring will be conducted during the Jay Project operations stage to confirm water quality estimates and to develop and implement adaptive management strategies, as required.	Environmental Monitoring
3.4.2.1 Jay Waste Rock Storage Area	The toe of the Jay WRSA will be constructed a minimum of 100 m from Lac du Sauvage and a minimum of 30 m from all other waterbodies and streams so as to allow for attenuation of seepage and to provide space for construction of seepage management infrastructure, if required. Seepage runoff from the Jay WRSA will be monitored as an extension of the existing Ekati Mine monitoring program, leading to implementation of adaptive management responses if necessary.	Environmental Monitoring
3.4.2.3 Haul Roads	The roads will be constructed of non-potentially acid generating, non-metal leaching waste rock from mining operations. Dust suppression measures will be applied as appropriate to active haul roads following practices established at the Ekati Mine.	Design / Mitigation
3.4.2.5 Lynx Pit	During the early years of the operations stage, water quality in the Lynx Pit will be monitored. When water quality in the Lynx Pit is proven to be suitable, discharge from the Lynx Pit to Lac de Gras will occur through a natural outlet in accordance with the established Lynx Pit closure and reclamation plan.	Environmental Monitoring / Reclamation
3.4.3 Closure and Post-closure Phase	Following completion of back-flooding, and upon confirmation that the water quality within the diked area is suitable, the Jay Dike will be breached and waters will be allowed to mix with the remaining portion of Lac du Sauvage. Dike breaching will occur at a few locations to 2 to 3 m below the average lake water level or to the original lakebed. During excavation of the dike breaches, silt curtains or other sediment/turbidity mitigation measures will be utilized where necessary to reduce risks to water quality. Also, excavated material will be locally placed for potential use by fish in the littoral areas of the dike. Water management during the post-closure phase will mainly consist of water quality monitoring as part of the Aguatic Effects Monitoring Program (AEMP) for the Jay Project	Reclamation / Environmental Monitoring
4.1 Water Management Design Basis	The Sub-Basin B Diversion Channel (Section 4.3) will be designed to divert the 1:100-year rainfall on snowmelt peak flow from the reporting catchment area, estimated based on the regional water balance (Dominion Diamond 2014a, Annex X), while providing 0.3 m of freeboard.	Design
4.10 Additional Water Management Considerations	The collection of surface minewater and open pit minewater will apply appropriate and cost-effective engineered solutions to minimize soil erosion, sediment entrainment, and seepage loss of collected water from the facilities. In areas where fine to coarse grained soils are encountered overlying weathered to intact bedrock, design measures will be taken to limit soil erosion and seepage losses from the drainage channels and collection sumps using natural means supplemented with engineered solutions. In areas where the soil and/or bedrock are of sufficiently low permeability to limit seepage losses, drainage measures will consider erosion protection and sediment control measures only. In areas where the soil and/or bedrock permeability is comparatively high, additional measures will be considered to limit seepage losses from the water control structures.	Design / Mitigation
4.10 Additional Water Management Considerations	Environmental monitoring of the water control system field performance will be carried out during the regular collection of groundwater and temperature data and annual geotechnical site inspections completed as part of the environmental monitoring program. Results of the data collection and site inspections will be used to assess and improve where necessary the field performance of the water control structures.	Environmental Monitoring
5.1 Closure Back-flooding	During next stages of the development of the Jay Project, additional modelling will be carried out for the proposed closure back-flooding procedure to better define the water transfer rates. In particular, the modelling will indicate whether reduced transfer rates will be required at certain times to limit impacts on the downstream hydrological regime during low flow periods, and also the likelihood that increased transfer rates are possible during freshet periods or during high flow periods. The modelling will be conducted with support from fish and fish habitat specialists to identify strategies that could be implemented to reduce impacts of the closure back-flooding to key components, such maintenance of fish passage, rate of change in water depths from late summer to winter, and changes to extension of lake surface area (due to changes in water level).	Environmental Management
5.4 Buildings, Roads, and Infrastructure	The reclamation of these facilities will be carried out following procedures described in the existing approved ICRP.	Reclamation
	Roads will be finally decommissioned once they are no longer required for post-closure monitoring and maintenance. Access roads will be re-graded to promote natural drainage, and culverts will be removed. Reclamation of pads will be completed after the above ground structures have been removed, and an environmental site assessment has been completed where appropriate (i.e., known hydrocarbon or other spills). Revegetation may be completed in areas with physical characteristics suitable to establish and support vegetation, as required. Power poles, pipelines, and pumping systems will be reclaimed by removal for salvage or disposal at the existing Ekati on-site landfills, in accordance with existing Ekati waste management strategies.	



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8.1 Minewater Monitoring Program and Adaptive Management	Data will be collected, compiled, and managed internally by Dominion Diamond and will be used to define on-site adaptive management requirements if necessary to meet the Jay Project-related performance standards in the receiving environment. Data collected as part of the minewater monitoring program will be reported to the required parties.	Environmental Monitoring
	The minewater monitoring program will be initiated at the pre-development stage (i.e., continued baseline studies) and will continue during construction, operations, and closure. Details of the minewater monitoring program (e.g., frequency, methods, and parameters to be monitored) will be defined during the next stages of Jay Project development and will be developed as a complementary extension of the existing monitoring program for the Ekati site (i.e., the Surveillance Network Program conducted under the Ekati Mine Water Licence). Additional monitoring stations may be established at select locations to further monitor or qualify water quality and quantity trends observed in the data collected under the minewater monitoring program.	
8.2 Receiving Environment Monitoring Program and Aquatic Response Framework	Monitoring will be conducted in the aquatic receiving environment. This will be an extension of the Aquatic Effects Monitoring Program (AEMP) that is conducted under the Ekati Mine Water Licence. Reporting the data collected from this program will occur annually, per the established practice at the Ekati Mine and other mines. The Jay AEMP is likely to include the same components as the current AEMP (i.e., water quality, flow, primary and secondary producers, fish) with monitoring locations in Lac du Sauvage and, if appropriate, Lac de Gras. The details for the Jay AEMP are anticipated to be determined as part of the (future) Water Licence issuance/regulatory approvals that would follow successful completion of environmental assessment.	Environmental Monitoring
8.2 Receiving Environment Monitoring Program and Aquatic Response Framework	The Aquatic Response Framework (ARF) for the Ekati Mine will also be expanded to incorporate the Jay Project. The overall objective of the ARF is to link the results of the AEMP with actions necessary to ensure that Jay Project-related effects in the receiving environment remain within acceptable range. An ARF for the Ekati Mine has been developed which currently under review by the Wek'ezhi Land and Water Board (Dominion Diamond 2014c).	Adaptive Management
8.3 Adaptive Management	Data collected as part of the monitoring program will be used to assess the need for adaptive management should trends in minewater quantity and quality differ from expectations. Adaptive management strategies may involve improvement or modifications of the proposed minewater management plan, or temporary use of the contingency allowances included in the design.	Adaptive Management
3B	Conceptual Closure and Reclamation Plan	
1.2 Progressive Reclamation during the Jay Project	The development of the Jay Project and increased Ekati mine life will provide opportunities for progressive reclamation. Progressive reclamation will make beneficial use of the operational resources available at the Ekati Mine to conduct the work efficiently.	Reclamation
4.1.1 Jay Open Pit	Dominion Diamond will work with Fisheries and Oceans Canada and Aboriginal communities to develop a fish-out plan for dewatering the diked area within Lac du Sauvage. Once fish salvage and dewatering has been carried out, the pit will be accessed by heavy equipment. Mining of the Jay kimberlite pipe will proceed as an open pit development using the operational practices that have evolved to a highly effective state through	Environmental Management
	16 years of open-pit mining at other Ekati Mine open pits.	
4.2.2 Configuration	The layout of the Jay WRSA incorporates the features for managing waste rock from the current Ekati WROMP Version 4.1 (Dominion Diamond 2014b). The key design features for the Jay WRSA are as follows:	Design
	 placement of a 2 m thick blanket of non-PAG waste rock (granite) over original ground within the WRSA footprint; 	
	mixed deposition of both PAG and non-PAG materials within the WRSA; and,	
	placement of a 5 m thick encapsulating cover layer of non-PAG (granite) waste rock.	
4.2.2 Configuration	WRSA seepage water will be monitored during mine operations and closure such that adaptive management actions can be implemented if necessary, per established practice at the Ekati Mine.	Environmental Management
5.3.1.4.1 Roads, Pipeline Benches and Pads	Wildlife crossings are to be constructed in areas along the road alignment where wildlife movement is expected, and will be based on existing caribou trail mapping and discussions during community engagement, with wildlife specialists, and Dominion Diamond's environmental team.	Mitigation / Design
	Roads with a pipe bench will be approximately 30 m wide and will be constructed using granite to a standard that is safe for use by mine operating equipment. The pipeline routing will follow the road alignment to minimize the Jay Project footprint.	
6.0 Post-Closure Maintenance and Monitoring	Monitoring for physical and chemical stability and maintenance of the reclaimed facilities will be required after closure and during post-closure until closure objectives and criteria are met (ultimate closure conditions are reached).	Reclamation / Environmental Monitoring
	Post-closure monitoring is discussed in the ICRP (BHP Billiton 2011, Appendix 5.1-6). The monitoring programs that will have been in place for mine operations will be used as basis and adapted to meet closure and post-closure specific needs.	
Section 4	Community Engagement	
4.2 Engagement Policy and Approach	Dominion Diamond is committed to engaging with potentially affected communities and stakeholders in an open, timely, and comprehensive manner. Since purchasing Ekati in April 2013, Dominion Diamond has made important commitments to communities and stakeholders that Dominion Diamond would provide a regular dialogue on all issues related to Ekati, including projects to extend mine life, with the senior management of the company, and would be responsive to issues raised by communities. Dominion Diamond is working hard to meet these commitments.	Engagement
4.4.1 Pre-Application Engagement	Since purchasing Ekati in April 2013, Dominion Diamond has committed to engaging in meaningful and productive ways with its IBA communities and other stakeholders. This engagement began during the purchase of Ekati by Dominion Diamond and has been continuing since the Dominion Diamond became the owners of Ekati.	Engagement
Table 4.4-1	Dominion Diamond committed to keeping IBA groups informed of any changes prior to information being publically available through the WLWB	Engagement
4.4.5 Post-DAR Submission Engagement	Dominion Diamond's commitment to engagement with potentially affected communities and stakeholders will continue post DAR submission as per Dominion Diamond's engagement approach. On-going engagement will include participation in the Environmental Assessment process, including responses to information requests, preparations of reports and presentations, and participation in community, technical, and MVRB hearings.	Engagement
4.4.5 Post-DAR Submission Engagement	Dominion Diamond will also continue with its current practice of quarterly engagement meetings and additional engagement, as required, through written exchanges, public meetings, and face-to-face meetings and workshops to discuss specific issues of interest, and to maintain two-way dialogue about the Project with the affected parties.	Engagement



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4.6 Planned Future Engagement Activities	Dominion Diamond will continue with its engagement work with communities to ensure they are fully informed about the Project and to address unresolved issues related to the project.	Engagement
	This engagement process includes quarterly engagement sessions with IBA groups to discuss all issues related to the Ekati Mine. The quarterly engagement meetings will include presentations on the Project. Dominion Diamond plans a series of engagement meetings with communities in November to provide further detail on the project and the DAR.	
	Dominion Diamond is also planning a series of information workshops for communities, regulators, governments, and parties to the Environmental Assessment process to explain the Project and the contents of the DAR (tentatively scheduled for the week of December 8 - 12, 2014).	
	Dominion Diamond is also developing a visualization program to assist in explaining the Project in the EA Hearing and in meetings with communities and stakeholders. This visualization program will include a physical model that will be used in engagement activities and computer generated images that show the various stages of the Project.	
	A Project newsletter is planned for early 2015, which will be distributed in communities to better explain the Project. Plain language summaries of the project in both English and translated into Aboriginal languages will also be distributed to communities.	
Section 5	Traditional Knowledge	
5.1.1 Background	Dominion Diamond Ekati Corporation (Dominion Diamond) has made all reasonable effort to provide assistance in the collection and consideration of TK relevant to the Project, to incorporate TK, and to engage Aboriginal TK holders to collect information and evaluate the specific impacts outlined in the TOR. Dominion Diamond will continue this effort as instructed by the MVRB. In its approach to TK integration, Dominion Diamond has consulted the MVRB's <i>Guidelines for Incorporating Traditional Knowledge in Environmental Impact Assessment</i> (MVRB 2005).	Traditional Knowledge
5.3.2 Dominion Diamond's Ongoing Engagement	Dominion Diamond has engaged, and will continue to engage, with communities during key Project milestones.	Engagement
5.3.2 Dominion Diamond's Ongoing Engagement	Specific engagement meetings were also held with, and will continue to be held with, regulators, government departments, and the IEMA.	Engagement
	Dominion Diamond will continue with its quarterly engagement sessions with Impact Benefit Agreement groups to discuss all issues related to the Ekati Mine. The quarterly engagement meetings will include presentations on the Project.	
	Dominion Diamond is also planning a series of information workshops for communities, regulators, governments, and parties to the Environmental Assessment (EA) process to explain the Project and the contents of the DAR. These workshops are tentatively scheduled for the week of December 8, 2014.	
	Dominion Diamond is also developing a visualization program to assist in explaining the Project in the EA Hearing and in meetings with communities and stakeholders. This visualization program will include a physical model that will be used in engagement activities and computer generated images that show the various stages of the Project.	
	A Project newsletter is planned for early 2015, which will be distributed in communities to better explain the Project. Plain language summaries of the project in both English and translated into Aboriginal languages will also be distributed to communities.	
5.3.6 Contributions to Monitoring	The TLU assessment included various measurement indicators to which no agreed-upon thresholds exist to assist in determining the level at which these indicators will prevent or discourage traditional use of the land. Therefore, the extent to which the measurement indicators may influence continued opportunities for TLU is difficult to measure. As a result, Dominion Diamond will meet with potentially affected Aboriginal groups about establishing a monitoring program that tracks the avoidance by traditional land users of the Ekati area.	Traditional Land Use / Engagement / Monitoring
	Dominion Diamond currently has existing monitoring programs in place to track effects on wildlife, aquatics, and air quality. Dominion Diamond will discuss with potentially affected Aboriginal groups collaborative ways for community members to be involved in these programs.	
	Aboriginal land users' intangible relationship with the land, while discussed within the assessment, was not considered in classifying residual impacts due in part to the personal and dynamic nature of this relationship that does not lend itself to measurement. For this reason, Dominion Diamond will support potentially affected Aboriginal communities' participation in meaningful programs designed to assist in the retention of their cultural connection to the land.	
Section 7		
7.3.2.2.1 Good Practices to Mitigate and Reduce Emissions	In keeping with its focus on responsible and sustainable development, Dominion Diamond has identified a series of good practices to minimize air quality impacts that it will employ.	Air Quality/ Environmental Management
7.3.2.2.1 Good Practices to Mitigate and Reduce Emissions	Continuous improvement and emission reduction are key management approaches that support the principle of keeping clean areas clean and encompass the Dominion Diamond goal of using best available technology economically achievable.	Air Quality/ Environmental Management
7.3.2.2.1 Good Practices to Mitigate and Reduce	Dominion Diamond will follow general management approaches for air emissions from the Project:	Air Quality/ Environmental
Emissions	Project mine equipment and haul vehicles will be regularly maintained to reduce emissions and maximize fuel efficiency.	Management
	Low sulphur (15 parts per million by weight [ppmw]) diesel will be used in fleet vehicles.	
	Site road topping surfaces will be regularly maintained for operational efficiencies and to minimize fuel consumption.	
	Energy conservation initiatives such as maintaining site road topping surfaces for energy efficiency will be undertaken.	
Emissions	specifically with respect to dust control, the largest emissions are transport related. Dominion Diamond will manage dust and particulate emissions by continuing and evolving the following management practices:	Air Quality/ Environmental Management
	water spray and chemical suppressant application to control dust emissions on haul roads during summer or non-frozen season; and,	
	managing vehicle speed to limit road dust from vehicle wheel entrainment.	
7.3.2.2.1 Good Practices to Mitigate and Reduce Emissions	Dominion Diamond plans to incorporate the results of its ambient air quality monitoring program into its environmental management plans as part of its response to the principle of continuous improvement.	Air Quality/ Monitoring



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7.4.2.2.4 PM _{2.5}	Dominion Diamond plans to develop an ambient air quality monitoring program that will be used to guide adaptive management strategies and the implementation of mitigation, if and as required, to maintain exposure to PM _{2.5} levels below those that would be of concern.	Air Quality/ Monitoring
7.4.2.2.5 Total Suspended Particulate	Dominion Diamond plans to develop an ambient air quality monitoring program that will be used to guide adaptive management strategies and the implementation of mitigation, if and as required, to maintain exposure to TSP levels below those that would be of concern.	Air Quality/ Monitoring
7.4.2.2.9 Dioxins and Furans	The Ekati Mine utilizes modern incineration equipment to achieve dioxin and furan concentrations below the federal guideline (Dominion Diamond, 2014a,b) and will continue this practice for the Project.	Air Quality/ Environmental Management
7.5 Prediction Confidence and Uncertainty	• Lower tier vehicle ratings were modelled than will likely exist in the current Ekati Mine vehicle fleet or that will be acquired for the Project fleet. Dominion Diamond will develop and execute air emissions management and ambient air quality monitoring programs as appropriate to validate that the predicted concentrations from the Project are conservative and to assist in managing that the Project emissions are kept to a reasonable level.	Air Quality/ Environmental Management/ Monitoring
7.7 Follow-Up and Monitoring	These programs form part of the environmental management system for the Project. If monitoring or follow-up detects effects that are different from predicted effects, or the need for improved or modified design features and mitigation, then adaptive management will be implemented. This may include increased monitoring, changes in monitoring plans, or additional mitigation. The existing Ekati Mine Air Quality Management and Monitoring Plan can be expanded to encompass the Project.	Air Quality/Monitoring/ Adaptive Management
Appendix 7B, 7B3.2.1.3 Waste Incinerators	Solid waste other than mine waste that is collected at the Ekati Mine is segregated based on its suitability to be burned in an on-site waste incinerators. Certain types of waste, such as sewage sludge, will not be incinerated.	Air Quality/ Waste Management
Appendix 7B, 7B3.2.3.4 Grading Operations	Graders will be used to keep on-site haul roads in working condition.	Air Quality/Environmental Management
Section 8	Key Line of Inquiry: Water Quality and Quantity	
8.4.2.2.3 Mitigation of Effects of Early and Late	Consistent with other operating northern mines, Dominion Diamond is committed to the following general management approaches for air emissions from the Project:	Water Quality/Air Quality
Operations Project Activities to Water Quantity	Project mine equipment and haul vehicles will be regularly maintained to reduce emissions and maximize fuel efficiency;	
	 low-sulphur (15 parts per million by weight [ppmw]) diesel will be used in fleet vehicles; 	
	the topping surfaces on site roads will be regularly maintained for operational efficiencies and to minimize fuel consumption; and,	
	 energy conservation initiatives such as maintaining the topping surfaces on site roads for energy efficiency. 	
8.2.5.1 Methods	A supplemental program was initiated in 2014 to collect additional water and sediment quality data primarily from Lac du Sauvage (under-ice and open-water conditions) and Lac de Gras (open-water conditions). Analysis and reporting of these data will be provided in a separate addendum at a later date.	Water and Sediment Quality
8.2.6 Summary of Local and Traditional Knowledge	Scientific monitoring programs will be developed, but traditional monitoring for changes in water quality can include ongoing observations of plants that grow near the edge of the water, smell of the water, quality of the fish (e.g., visible sores on their bodies, softness of the flesh), and fish ecology and health (Weledeh Yellowknives Dene 1997; NSMA 1999).	Traditional Knowledge/Monitoring
8.3.2 Construction Phase	Roads will be constructed using non-potentially acid generating (non-PAG) rock, and established management practices for erosion and sediment control will be used.	Environmental Management / Design
	The dike in Lac du Sauvage will be constructed using non-PAG material from site.	
	During summer construction, turbidity curtains will be installed near the portion of the alignment where dike construction will occur.	
	The diked area of Lac du Sauvage will be dewatered in a phased approach:	
	 During the first phase of pumping (approximately 15 million m³ of water), water is anticipated to be low in total suspended solids (within approved discharge limits), and will be pumped directly from the contained area over the dike into Lac du Sauvage. The pumping rate will be managed to avoid disturbance of sediment in the receiving environment. 	
	 During the second phase of pumping (approximately 12.8 million m³), water is anticipated to be higher in TSS, (i.e., above approved discharge limits) and water will be pumped to the mined-out Lynx and Misery pits rather than directly to surface water. Once pumped to either pit, the water will be left for the suspended sediments to naturally settle. 	
8.3.3 Operations Phase	• During operations, minewater monitoring will be conducted as part of the overall minewater management (i.e., Surveillance Network Program [SNP]), as well as in the receiving environment (i.e., Aquatics Effects Monitoring Program [AEMP]). Existing Ekati monitoring programs will be expanded to include the Jay Project and to meet water licence requirements.	Monitoring
8.3.4 Closure Phase	• Water will be pumped from the Misery Pit to the bottom of the Jay Pit as the primary initial refilling source until the water level in the Misery Pit has been lowered to 60 m below its spill elevation.	Environmental Management / Design
	 This is a key environmental component of the Mine Water Management Plan because it divides the high TDS water between two pits, and thus, allows capacity for a freshwater cap on both pits. The addition of a freshwater cap is required to establish meromictic conditions in the pits to isolate minewater from the receiving environment. 	
	• The Misery Pit, and the diked area including the Jay Pit within Lac du Sauvage, will be back-flooded with water pumped from Lac du Sauvage to cap the high TDS pit water. Back-flooding to the diked area will re-establish natural water levels within the diked area. Water will be pumped at rates that will not adversely affect flow rates and levels at the Lac du Sauvage and Lac de Gras outlets. This is estimated to take approximately 4 years.	
	• Water quality in the pits and diked area will be monitored during back-flooding to confirm that closure criteria will be met and that the pits can be reconnected with the receiving environment.	
	 The Jay Pit and the back-flooded diked area will be connected to Lac du Sauvage through breaching of the dike. 	
	 The Misery Pit will be back-flooded and allowed to spill over to Lac de Gras via a natural channel. 	
	The Sub-Basin B Diversion Channel will be reclaimed and flow from the sub-basin B watershed will return to Lac du Sauvage through natural drainage.	
	Monitoring will continue in closure and into post-closure as required by the water licence.	



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8.4.2.2.1 Mitigation of Effects of Project	Where construction is required, the following mitigations will be used:	Design / Surface Hydrology
Infrastructure and Dike Construction to Water	Roads will be built as narrow as practical while maintaining safe construction and operation practices.	
Quantity	Roads will follow alignments that minimize stream crossings (e.g., heights of land, where practical) and if feasible, stream crossings will be perpendicular to watercourses.	
	Roads will avoid sensitive habitat where feasible.	
	Culverts will be installed or upgraded as necessary, and monitored along site access roads to use and maintain natural drainage patterns, and reduce the use of ditches and diversion berms. More information on culvert design is included below.	
	Culverts will be designed and constructed for peak flows corresponding to the 1 in 50 year, 24-hour rainfall event.	
	Culverts will be constructed using a staggered configuration where possible, and will be regularly inspected and maintained.	
8.4.2.2.1 Mitigation of Effects of Project	During the construction of the dike, and throughout operations, two environmental design features will be implemented:	Surface Hydrology / Design
Infrastructure and Dike Construction to Water Quantity	 during construction, silt (turbidity) curtains will be used as the primary mitigation to limit the extent of total suspended solids (TSS) mobilization through summer season dike construction activities, and wave action on the exposed dike walls to adjacent waters in Lac du Sauvage; and, 	
	a low-permeability geotechnical element will be established within the dike structure to reduce water seepage from Lac du Sauvage into the diked area.	
8.4.2.2.1 Mitigation of Effects of Project Infrastructure and Dike Construction to Water Quantity	An internal, low-permeability geotechnical barrier, comprising a bentonite wall keyed into underlying bedrock, will be used to reduce the potential for seepage from Lac du Sauvage through the dike to the isolated area.	Design
8.4.2.2.1 Mitigation of Effects of Project Infrastructure and Dike Construction to Water Quantity	The Sub-Basin B Diversion Channel has the potential to create back-watering or drawdown effects that could alter upstream lake water levels and discharges. The diversion channel may also have different channel and bank stability than natural drainage pathways. To mitigate these effects, the diversion channel and culverts will be designed to maintain baseline upstream lake flow and water level regimes, and to accommodate the 1-in-100 year flow and additional freeboard elevation to reduce flooding and erosion potential. This design will reduce risks of erosion and sedimentation. Geotechnical investigations will confirm subsurface conditions along the diversion to avoid ice-rich, erodible soils, and that the foundational stability of the channel is assured.	Design /Surface Hydrology
8.4.2.2.2 Mitigation of Effects of Dewatering to Water Quantity	A detailed Dewatering Plan for the diked area of Lac du Sauvage is anticipated to be a requirement of the Water Licence issued by the Wek'èezhi Land and Water Board as part of the regulatory process following completion of environmental assessment. The plan will incorporate discharges to lake environments rather than stream environments to attenuate changes in flow. Discharge locations will be determined during the detailed design stage, and may be modified based on field surveys and monitoring results.	Surface Hydrology /Environmental Management
8.4.2.2.2 Mitigation of Effects of Dewatering to Water Quantity	Lac du Sauvage water levels and discharges will be monitored to assess the surface hydrology effects of dewatering the diked area of Lac du Sauvage. The monitoring will provide input into adaptive management decision making, if necessary to protect the receiving environment from adverse effects. Monitoring programs are an effective method of providing information to decision-making related to operational decisions, and are used at the Ekati and Diavik mines to manage surface water.	Surface Hydrology /Monitoring
8.4.2.2.2 Mitigation of Effects of Dewatering to Water Quantity	The outflow capacity of Lac du Sauvage will be maintained during dewatering, and the channel banks of the Lac du Sauvage outlet channel will be monitored to identify erosion beyond natural rates.	Surface Hydrology / Monitoring
8.4.2.2.3 Mitigation of Effects of Early and Late Operations Project Activities to Water Quantity	To mitigate the volume of freshwater required for the Project, recycled water will continue to be used in the processing of the mined kimberlite ore. The Project will use the existing processing plant at the Ekati Mine.	Surface Hydrology /Environmental Management
8.4.2.2.4 Mitigation of Effects of Back-flooding to Water Quantity	The back-flooding phase of the Project has the potential to affect water levels and flows in Lac du Sauvage, Lac de Gras, and the Lac du Sauvage and Lac de Gras outlets. During this phase, water from Lac du Sauvage will be pumped to the Jay Pit and diked area, and the Misery Pit. A closure plan has been developed which includes management of dike breaching and removal activities to avoid adverse environmental effects in the receiving environment based on experience and sound engineering approaches.	Surface Hydrology /Environmental Management
8.4.2.2.4 Mitigation of Effects of Back-flooding to Water Quantity	The dewatered areas will be back-flooded to provide a controlled flow of water to protect source water and downstream areas, including local fish habitat.	Surface Hydrology /Environmental Management
8.4.2.2.4 Mitigation of Effects of Back-flooding to Water Quantity	During anticipated low-flow periods, such as winter months, pumping rates out of Lac du Sauvage into the pits and diked area will be reduced as appropriate.	Surface Hydrology /Environmental Management
8.4.2.2.4 Mitigation of Effects of Back-flooding to Water Quantity	Pumping rates will be managed to minimize effects on Lac du Sauvage, and will be based on an assessment of required flows through the outlet.	Surface Hydrology /Environmental Management
8.4.2.2.5 Mitigation of Effects on Water Quantity After Pit Back-Flooding	The Sub-Basin B Diversion Channel will have been re-graded to promote drainage through the natural drainage pattern to Lac du Sauvage. The reclaimed diversion channel will be made safe for movement of wildlife, particularly caribou, and people.	Water Quantity/Engineering
8.4.2.2.5 Mitigation of Effects on Water Quantity After Pit Back-Flooding	Reconnection of the diked area to Lac du Sauvage and reconnection of the Sub-Basin B natural drainage channel will return water levels within the diked area and basin drainage characteristics to natural conditions.	Surface Hydrology /Engineering
8.4.2.2.5 Mitigation of Effects on Water Quantity After Pit Back-Flooding	Reclamation of pads will be carried out after the above-ground structures have been removed, and an environmental site assessment has been completed. Other areas, such as roads, may be scarified to encourage natural plant colonization. These mitigations will also allow for the surface to be safe for wildlife use and travel, and will also return the surface water regime at the site to a state as close as practical to pre-Project conditions. These mitigations will appropriately reduce long-term risks to the surface water hydrology regime.	Surface Hydrology /Reclamation
8.4.2.3.1 Mitigation of Effects from Use of Explosives to Water Quality	Appropriate explosive management practices (e.g., storage and handling controls, spill and waste management, blast design efficiency, minimize overloading, minimizing misfires) will be undertaken on site, consistent with practices already in place at the Ekati Mine.	Water Quality/ Environmental Management



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8.4.2.3.2 Mitigation of Effects From Erosion and Sediment Generation to Water and Sediment Quality	Appropriate sediment and erosion controls will be used during Project activities for construction, operations, and closure (e.g., timing of construction, use of silt curtains within waterbodies or along drainage paths, road watering, site contouring). These practices will be consistent with those used at the Ekati Mine. These practices are based on the most appropriate methods that have been found to be most effective in northern mining operations for erosion and sediment control.	Water Quality/ Environmental Management
8.4.2.3.2 Mitigation of Effects From Erosion and Sediment Generation to Water and Sediment Quality	Frozen ground and ice-covered conditions limit the total footprint of disturbances to the areas immediately adjacent to the construction zone. For example, where possible, watercourse crossings for the Project will be constructed at low or no flow conditions (potentially during the winter months when the streams are frozen or not flowing). In-stream works during frozen or non-flowing conditions will minimize the potential for erosion, sediment releases, and effects on receiving water quality. Other construction activities will include mitigation to limit the extent of erosion and mobilization of soils and sediment.	Water Quality/ Design / Mitigation
8.4.2.3.2 Mitigation of Effects From Erosion and Sediment Generation to Water and Sediment Quality	Silt (turbidity) curtains will be used to reduce the transport of sediment from dike construction activities within Lac du Sauvage, and silt fences will be used to reduce the transport of sediment from general land- based land disturbance activities. This mitigation is applied in many mining operations when land disturbances, such as the construction of a dike or land clearing, may directly influence a waterbody.	Water Quality/ Mitigation
8.4.2.3.2 Mitigation of Effects From Erosion and Sediment Generation to Water and Sediment Quality	To mitigate the extent of water quality effects during the construction of the Jay Dike in the Lac du Sauvage, silt curtains will be used to control elevated TSS and turbidity from extending into the lake. Silt curtains may also be used within the diked area to manage TSS during dewatering. To determine the location of the silt curtains in Lac du Sauvage and specific design features of the silt curtains, several factors will be considered, namely the hydrodynamics of the area adjacent to the diked area in Lac du Sauvage so that the curtains have sufficient strength to withstand the forces of weight and drag from waves and currents. The silt curtain panels will overlap so there are no gaps between panels and curtains to allow the release of sediments from the enclosed area. Areas within and outside of the curtained area will be regularly monitored for turbidity and TSS.	Water Quality/Mitigation/ Monitoring
8.4.2.3.2 Mitigation of Effects From Erosion and Sediment Generation to Water and Sediment Quality	Dewatering discharge from the diked area in Lac du Sauvage during construction, and piped discharge from the Misery Pit to Lac du Sauvage during operations will be pumped to Lac du Sauvage via a diffuser to disperse discharge energy and rapidly attenuate the discharge. The diffuser type and location may differ between the dewatering and operational discharge phases.	Water Quality/ Design
8.4.2.3.2 Mitigation of Effects From Erosion and Sediment Generation to Water and Sediment Quality	The discharge to Lac du Sauvage will occur through an engineered submerged diffuser outfall, which will be placed in a deep area of the lake and located above the lake bed to provide an appropriate distance between the diffuser outflow and bottom sediments. This design will maximize dispersion and attenuation of the discharge from the diffuser, and will reduce the potential for resuspension of sediments and any potential effects on water and sediment quality and aquatic habitat.	Water Quality/ Design
8.4.2.3.2 Mitigation of Effects From Erosion and Sediment Generation to Water and Sediment Quality	Engineered diffusers for the dewatering and operational discharge phases have been proposed for the Project.	Water Quality / Monitoring/ Environmental Management
8.4.2.3.3 Mitigation of Effects From Deposition of Air Emissions and Fugitive Dust to Water and Sediment Quality	The use of existing roads between the Ekati Mine and the airstrip and the Misery site, and the construction and use of site roads for the Project, creates the potential for fugitive dust generation over summer months. Applicable mitigation to reduce the potential for dust generation includes the following: water spray and chemical suppressant application to control dust emissions on haul roads during summer or non-frozen conditions; managing vehicle speed to limit road dust from vehicle wheel entrainment; and, incorporating the results of the ambient air quality monitoring program into emission management plans as part of the Ekati Mine's response to the principle of continuous improvement. 	Water Quality/ Air Quality/ Monitoring
8.4.2.3.3 Mitigation of Effects From Deposition of Air Emissions and Fugitive Dust to Water and Sediment Quality	Consistent with other operating northern mines, Dominion Diamond is committed to the following general management approaches for air emissions from the Project: Project mine equipment and haul vehicles will be regularly maintained to reduce emissions and maximize fuel efficiency; low-sulphur (15 parts per million by weight [ppmw]) diesel will be used in fleet vehicles; the topping surfaces on site roads will be regularly maintained for operational efficiencies and to minimize fuel consumption; and, energy conservation initiatives such as maintaining the topping surfaces on site roads for energy efficiency. 	Water Quality/Air Quality/ Monitoring/ Environmental Management
8.4.2.3.4 Mitigation of Effects From Potentially Acid-Generating Material to Water and Sediment Quality	 For the Project, experience at the Ekati Mine and site-specific conditions were used to develop a WRSA design (Section 3.5.5) that effectively mitigates risk, based on proven approaches. The Jay WRSA design features include the following: A layer of granite rock (approximately 2 m thick) will be placed over the tundra before the WRSA is constructed to promote early aggradation of permafrost into the base of the WRSA, and limit contact of PAG waste rock with surface water flow over tundra soils, which can be naturally acidic. PAG materials (e.g., metasediment) will be encapsulated within a thermally protective and geochemically non-reactive cover so that the potentially reactive materials remain at freezing conditions, thereby promoting stable storage over time. The WRSA will be constructed with setbacks from receiving waterbodies as mitigation to allow for attenuation of drainage by tundra soils, and to allow for contingency construction of water collection structures downstream of the toe of the WRSA, if required. 	Water Quality/ Geochemistry/ Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 Cross-drainage structures will be designed and constructed such that structures will provide a design conveyance for the 1-in-50 year event without overtopping the roadway Regular inspections of roads and cross-drainage structures will be performed 	Surface Hydrology / Design
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 Use of staggered culvert configuration, and removal of snow at the culvert inlet and outlet before the freshet to promote drainage during spring thaw and freshet Regular inspection of the road to identify any areas where ponding of water along the road represents a risk, and installing additional culverts to alleviate the risk 	Surface Hydrology / Design
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	Cross-drainage structures will be designed to allow navigation (i.e., bridge) for crossings with navigable waters	Surface Hydrology/ Design



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8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The Project footprint disturbance area will be limited to the extent practical Design of the Project minimizes the construction of new buildings, roads, pads, or excavations Erosion and sediment control practices (e.g., silt fences, runoff management) applicable to northern environments and already in place at Ekati will be used during construction around disturbed areas, where appropriate Runoff and seepage from Project facilities will be managed where appropriate to avoid adverse environmental effects in downstream waterbodies Culverts will be installed or upgraded along site access roads, as necessary, to maintain drainage Access roads will be as narrow as possible, while maintaining safe construction and operation practices The road route alignment will be designed to minimize stream crossings and avoid sensitive habitat as feasible; where feasible, crossings will be perpendicular to watercourses Where practical, natural drainage patterns will be used to reduce the use of ditches and diversion berms The Project footprint will be reclaimed at closure 	Hydrogeology/ Surface Hydrology/Water Quality/ Design
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 A detailed dike construction plan will be developed and implemented that includes environmental mitigation Erosion and sediment control measures will be implemented in Lac du Sauvage during dike construction where appropriate (e.g., installation of silt curtains for turbidity control) 	Surface Hydrology/Water Quality/ Engineering/ Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The dike alignment has been designed to minimize the area required to access the Jay pipe, and represents less than 5% of the Lac du Sauvage surface area At closure, natural water levels in the diked area of Lac du Sauvage will re-establish an anticipated groundwater flow gradient towards the lake Groundwater inflows to the Jay Pit will be monitored to verify the hydrogeology model and impact on nearby lakes 	Surface Hydrology/Water Quality/Hydrogeology/ Environmental Design/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 A Dewatering Plan will be prepared for the WLWB that will include locations for flow rates and water quality monitoring to meet regulatory requirements Discharge water will be regularly sampled and monitored for TSS as part of the Dewatering Plan Direct discharge flow rates will be developed and maintained to eliminate potential for erosion Channel banks at the Lac du Sauvage outlet channel will be monitored for evidence of erosion Defined limits/pumping conditions will remain within Lac du Sauvage outlet capacity 	Surface Hydrology/ Water Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The pumped discharge of water from the diked area to Lac du Sauvage will be limited to water that meets pre-defined criteria for TSS Discharge water will be regularly sampled and monitored as part of the Dewatering Plan If TSS concentrations are too high for the direct release of water to the natural environment, the water will be pumped to the Lynx or Misery pits Discharge will be directed through properly designed structures to the lake environment to prevent erosion and sediment entrainment in the receiving waterbodies 	Water Quality/ Sediment Quality/ Environmental Design
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The diversion channel and culverts will be designed for the 1-in-100 year flow and will include additional freeboard to reduce flooding and erosion potential The channel will be designed to maintain baseline upstream lake levels Monitoring and maintenance of the channel and culverts will be completed to remove accumulated sediment and soil/rock fall material and ice/snow blockages 	Surface Hydrology/ Sediment Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 A Mine Water Management Plan has been developed specifically for the Jay Pit, which will become an amendment to the Ekati Mine Wastewater and Processed Kimberlite Management Plan During operations, saline groundwater inflows will be pumped to the mine inflow sump located within the diked area in a natural depression near the crest of the Jay Pit Saline groundwater from the sump will be pumped to the bottom of Misery Pit 	Hydrogeology/Water Quality/ Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 Rock mined from the Jay Pit will be managed according to established procedures (i.e., thermal cover over metasediment rock) Waste rock will be stored on permafrost with no connection to deep groundwater regime Thermistors will be installed within the waste rock storage area to monitor permafrost Seepage will be monitored and managed, if necessary, as described in the Waste Rock and Ore Storage Management Plan 	Hydrogeology/ Water Quality/Surface Hydrology/ Environmental Management/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 FPK slurry will be deposited into the mined-out Panda and Koala pits, including the associated underground workings Excess minewater in the Panda and Koala pits will be pumped to the LLCF (during operations) where it will be managed through the existing monitoring and discharge programs as per water quality criteria in the Water Licence The Ekati Mine Wastewater and Processed Kimberlite Management Plan, which already anticipates the use of Panda and Koala open pits for FPK deposition, will be updated to incorporate the Project 	Hydrogeology/Water Quality/ Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The Project will use existing potable water system at site; demand is not anticipated to increase Freshwater for Ekati operations is permitted to be drawn from Grizzly Lake, Little Lake, Thinner Lake (Misery Camp); the LLCF provides recycled water for operation of the processing plant Potable water is trucked from Ekati to Misery Camp Raw water required for processing plant operations is taken from the LLCF, where the fine tailings have settled and clear water is available Site water management is designed to recycle water, where applicable, and reduce requirements for water withdrawal Water withdrawal rates will be controlled to meet the requirements of the Water Licence and avoid adverse effects on the source water lakes 	Surface Hydrology/Water Quality/ Environmental Management/ Monitoring



Section of the DAR	Commitment Description	Subject/Component
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology,	Sewage from the Jay/Misery sites will be trucked to the main camp sewage facility where an enclosed sanitary sewage treatment plant has been commissioned to treat all domestic wastewater to primary and secondary levels of treatment	Water Quality/ Environmental Management/ Monitoring
Surface Water, and Surface Water Quality	Treated effluent is pumped to the processing plant and discharged to the LLCF as per existing Ekati Mine operations	
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 Standard practices of erosion and sediment control (e.g., silt curtains, runoff management) already in use at the Ekati Mine will be used during construction around disturbed areas, where appropriate Monitoring programs will be implemented In-stream works will either be avoided or limited to when watercourses are not flowing, where possible. Runoff from facilities will be managed where appropriate to settle out suspended sediments before release 	Water Quality/ Environmental Design/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 Rock mined from the Jay Pit will be managed according to established procedures (i.e., thermal cover over metasediment rock) to prevent acid rock drainage and metal leaching Rock used to construct the dikes will be non-acid generating Seepage management will be addressed as described in the Waste Rock and Ore Storage Management Plan (regular monitoring) Runoff and seepage water will be collected and managed, if required, to protect the receiving environment Appropriate explosive management practices (e.g., storage and handling controls, spill and waste management, blast design efficiency, minimize overloading, minimizing misfires) will be undertaken on site, consistent with practices already in place at the Ekati Mine Use of Misery Pit allows for minewater to be stored and not discharged until Year 5 of operations Operational discharge will meet water quality discharge criteria Discharge water will be regularly sampled and monitored Water and sediment quality in the receiving waterbodies will be monitored under the Aquatics Effects Monitoring Program An engineered discharge diffuser will be used to enhance mixing 	Surface Hydrology/Water Quality/ Geochemistry/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The dike alignment has been designed to minimize the area that will be isolated within Lac du Sauvage to mine the Jay pipe and represents less than 5% of the Lac du Sauvage surface area The Mine Water Management Plan was developed to minimize effects on hydrologic conditions Monitoring for bank erosion will be conducted when discharging and preventative actions taken if necessary 	Surface Hydrology / Design/ Environmental Management/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The pumped discharge will be directed through an engineered diffuser to prevent erosion Discharge flow rates will be developed and maintained to reduce potential for erosion The diffuser discharge ports will be located above the lake bed to minimize erosion The diffuser will be located in a sufficient depth of water with the ports directed at such an angle as to minimize the potential influence on lake bottom sediment and surface ice 	Surface Hydrology /Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 Operating procedures for equipment and Project activities will be developed and adhered to reduce the potential for dust generation and air emissions (e.g., regular maintenance of equipment, use of low-sulphur diesel fuel) Regular maintenance of equipment utilized for the Project will continue at the Ekati and Misery sites Dust suppression measures will be applied as appropriate to haulage roads, airstrip, laydown areas Speed limits will be established on all roads to reduce production of dust Equipment and vehicles will be equipped with industry-standard emission control systems Conveyance and processing facilities will be enclosed 	Water Quality/ Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 During back-flooding, minewater from the Misery Pit will be pumped to the bottom of the mined-out Jay Pit, which places elevated TDS water in the deeper parts of the pit where the surrounding deep groundwater naturally contains elevated TDS At closure, natural water levels in the diked area of Lac du Sauvage will be re-gained, re-establishing an anticipated groundwater flow gradient towards the lake 	Hydrogeology/ Surface Hydrology /Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	Back-flooding rates and volumes will be managed to prevent adverse environmental effects in the source lake (Lac du Sauvage) and downstream, consistent with the approach established for all source lakes to be used for pit flooding under the approved Ekati Mine Interim Closure and Reclamation Plan	Surface Hydrology/Water Quality/ Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The Project will be included in the Ekati Mine Interim Closure and Reclamation Plan; this plan will be updated as per regulatory requirements through operations and adhered to through closure Back-flooding of the lower Jay Pit with higher TDS water pumped from the Misery Pit will isolate the lower pit water (and residual constituents, such as ammonia from blasting) from the overlying low TDS lake water Lake bottom sediments from initial excavation of the Jay Pit will be co-disposed within the Jay WRSA, and therefore, not available for released of excess nutrients into Lac du Sauvage at closure The diked area will be re-flooded with freshwater from Lac du Sauvage 	Water Quality /Environmental Management / Monitoring
	 Water quality monitoring will be conducted during the back-flooding period, which would enable management response actions, if necessary, to protect the lake from adverse environmental effects 	



Section of the DAR	Commitment Description	Subject/Component
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 Disturbed areas will be reclaimed for long-term stability Erosion and sediment control practices, applicable to northern environments, will be implemented where appropriate A closure plan has been developed which will include management of dike breaching / removal activities to limit the potential for effects on the environment Breaching and removal of dikes will only occur when water quality within the diked area meets specifications Drainage patterns will be re-established as close to pre-Project conditions as possible, including the Sub-Basin B Diversion Channel 	Water Quality /Environmental Management / Reclamation
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The Ekati Interim Closure and Reclamation Plan will be updated to include Project components Natural drainage patterns will be re-established as practical and the natural lake level in Lac du Sauvage will be re-established 	Surface Hydrology / Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 At closure, natural water levels in Lac du Sauvage will be re-established Water quality in the refilled area will meet acceptability criteria before the dike is breached to allow a reconnection with the main Lac du Sauvage basin Higher TDS minewater and potentially elevated nutrients on residual pit benches will be isolated in the lower part of the Jay Pit 	Water Quality / Environmental Management / Reclamation
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 The Panda and Koala open pits will be reclaimed by pumping freshwater into the pits as a 'cap' (approximately 30 m deep) overlying the fine processed kimberlite according to the approach already established for the Beartooth Pit The Ekati Interim Closure and Reclamation Plan will be updated to include Project components Scheduled withdrawals will be managed so that withdrawal rates in source lakes do not result in adverse environmental effects in the source lakes 	Surface Hydrology/ Environmental Management
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 After mining has ceased in the Jay Pit, water will be pumped from the Misery Pit, which will be capped with freshwater (approximately 60 m) drawn from Lac de Gras The water quality in the Misery Pit will meet acceptability criteria before natural overflow to Lac de Gras is allowed 	Environmental Management/ Water Quality
8.4.2.4.1 Pathways with No Linkage, Table 8.4-1 Potential Pathways for Effects on Hydrogeology, Surface Water, and Surface Water Quality	 A Spill Contingency Plan is in place for the Ekati Mine and will incorporate the Jay Project Regular equipment maintenance is conducted (e.g., regular checks for leaks) Drip trays and/or absorbent pads are used during servicing and refuelling All hazardous substances are stored and handled on site in accordance with applicable regulations Fuel is stored at central bulk fuel farms and fuel tanks are housed within bermed areas The Project will follow standard policies used at the Ekati Mine in the event of a spill; spill response training is provided and updated Hydrocarbon-impacted material will continue to be handled in accordance with the approved management plan 	Hydrogeology/Water Quality / Environmental Management
8.4.2.4.1 Pathways with No Linkage, Hydrogeology	Waste rock facilities will be located on permafrost with no connection to deep groundwater regime.	Hydrogeology/Water Quality / Environmental Management
8.4.2.4.1 Pathways with No Linkage, Hydrogeology	• Metasediment from the Jay open pit will be placed such that there will ultimately be an encapsulating layer of granite rock at least 5 m thick. Preferentially freezing the reactive materials into permafrost as a long-term environmental risk reduction is the approach already in use and effective at the Ekati Mine. The proportions of granite versus metasediment to be mined from the Jay Pit provide ample granite for this cover layer.	Hydrogeology/Geochemistry/ Environmental Management
8.4.2.4.1 Pathways with No Linkage, Hydrogeology	• Water seeping from the WRSA during the construction and throughout operations will be monitored as part of the established WRSA Seepage Monitoring Program such that management actions can be implemented if necessary.	Hydrogeology/Monitoring
8.4.2.4.1 Pathways with No Linkage, Hydrogeology	• The final surface of the WRSA will be graded to reduce snow accumulation as a means of enhancing freezing (i.e., reducing the insulating effect of snow cover).	Environmental Management
8.4.2.4.1 Pathways with No Linkage, Hydrogeology	Temperature monitoring systems will be placed in the WRSA to assess long-term permafrost aggradation.	Monitoring
8.4.2.4.1 Pathways with No Linkage, Groundwater Quality	 Prevention of spills is the best mitigation and can be achieved through the following procedures: Plans (e.g., as summarized in Section 3.4.3, Waste Management Plan, Incinerator Management Plan, Hazardous Waste Management Plan, Hydrocarbon-Impacted Material Management Plan) for the storage, handling, and disposal of material, plus emergency responses (i.e., Spill Contingency Plan). Quick action in response to any reported spill. Appropriate training of staff. Regular maintenance of equipment, use of drip trays and/or absorbent pads during servicing and refuelling, and storage and handling of all hazardous substances in accordance with applicable regulations. Storage of fuel at central bulk fuel farms in bermed areas. 	Environmental Management/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Groundwater Quality	• To prevent contamination from hydrocarbon-impacted material, proper handling (e.g., identification of sources of contaminated materials, and identification of facilities to treat and dispose of materials) in accordance with the approved management plan is required.	Environmental Management



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8.4.2.4.1 Pathways with No Linkage, Groundwater	To prevent contamination from contaminated snow and soil:	Environmental Management
Quality	 Snow or ice that is contaminated by operational spills of diesel, glycol, gasoline, kerosene, jet fuels, hydraulic oil, transmission fluid, and lube oil will be stored in a bermed and lined facility specific for containment of contaminated snow (as summarized in Section 3.4.1.8.6, Contaminated Snow Containment Facility). 	
	• In the spring, the hydrocarbon contaminant sheen that remains after the snow or ice melts in the containment facility is removed and properly disposed of, and the remaining water pumped to the LLCF.	
	- Soil that is contaminated by hydrocarbons during a spill event is disposed at the Ekati Mine landfarm facility, or temporarily stored and shipped offsite for alternative disposal.	
	Soil with an average particle size of less than 4 centimetres (cm) is remediated at the landfarm facility (Section 3.4.1.8.5).	
8.4.2.4.1 Pathways with No Linkage, Water Quality	 Water will be discharged at a pumping rate that does not cause disturbance to the sediments and water may be released at the surface of a deep basin through a piped outfall directly onto an energy dispersion structure (e.g., a float designed to dissipate the waters' energy, consistent with the flexi-float used at Diavik; DDMI 2006). This structure is an anchored, floating platform on which the discharge pipes are secured. The piped outfall is suspended over the float in open water at the discharge location, so that the discharged water falls onto the float and is dispersed onto the lake rather than directly plunging into the lake. As a result, disruption to lake bottom sediments is minimized. 	Environmental Management/ Water Quality
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	• The site water management system is designed to recycle and reuse water, where applicable, to reduce requirements for water withdrawal from surrounding lakes.	Environmental Management/ Water Quality
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	• The Project will use existing raw water sources for the Ekati Mine, including Grizzly Lake, Little Lake, Falcon Lake, and Thinner Lake to meet potable and raw water needs, the potable water treatment facility at Ekati, and the LLCF for processing plant water; freshwater demand is not anticipated to increase as a result of the Project.	Environmental Management/ Water Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	Potable water is currently trucked from the Ekati site to the Misery camp; no changes to this supply process are anticipated for the Project.	Environmental Management/ Water Quality
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	Raw water required for processing plant operations is recycled with the processing plant and from the LLCF.	Environmental Management/ Water Quality
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	Extraction rates from the supply lakes will continue to be managed within the allowable amounts in the Water Licence.	Environmental Management/ Water Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	• The road alignments have been designed with consideration of minimizing stream crossings and will be as narrow as possible while maintaining safe construction and operation practices. Culverts will be installed along roads, as necessary, to maintain drainage.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	• Standard erosion and sediment control measures (e.g., silt fences, silt curtains, sand bags, runoff management) consistent with those used during the development of mines in the north (e.g., Ekati and Diavik mines) will be used during construction around all disturbed areas, where appropriate.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	• Where possible, in-stream works will be avoided or limited to conditions when watercourses are not flowing. If water is present in streams where crossings will be constructed, isolation structures or silt fences will be used to minimize the extent of TSS disturbance downstream of the construction.	Environmental Management/ Water and Sediment Quality/ Surface Hydrology/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	Haul roads and access roads will be watered to reduce fugitive dust generation from haul traffic.	Environmental Management/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	Overland runoff will be managed (e.g., formed drainage paths, interceptor channels, silt fences), as necessary, before release to downstream environments.	Environmental Management
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	• The pumped discharge from the Misery Pit to Lac du Sauvage will be directed through an appropriately designed submerged diffuser to prevent erosion of the lake bed sediments.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	• The diffuser will be located in approximately 8 m of water with strategically designed discharge ports that are angled to minimize the potential influence on surface ice and lake bed sediments.	Environmental Management
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	The diffuser discharge ports will be located above the lake bed to minimize the potential for erosion.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	 Back-flooding will be managed through pump rates and seasonality to minimize effects in source waterbodies. Surface water will be pumped to the pits and diked area at a rate that does not significantly alter downstream flow rates and water levels (especially in the outlet channels) (e.g., adjusting the pumping rate for season and minimum flow rates and a monitoring location) 	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	Monitoring during the back-flooding will enable adaptive management responses, if necessary, to limit the potential for long-term nutrient and metals releases to the back-flooded area.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.1 Pathways with No Linkage, Water and Sediment Quality	• The diked area (including Jay Pit) and the Misery Pit will not be permitted to overflow and reconnect with Lac du Sauvage and Lac de Gras, respectively, until acceptability criteria are met.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	• Cross-drainage structures will be implemented in such a way that, for fish-bearing watercourses, they will provide sufficiently low-flow velocity that the slowest local fish can reasonably navigate the structure under a particular design flow condition (e.g., 3-day delay; 1-in-10-year return flood condition).	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	• The structures will provide a design conveyance for 1-in-50-year event without overtopping the roadway, which will result in minor changes in stream velocity.	Environmental Management/ Surface Hydrology/ Monitoring



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8.4.2.4.2 Secondary Pathways, Surface Hydrology	Roads and cross-drainage structures will be inspected regularly.	Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	• Regular inspections of roads and cross-drainage structures, and removal of snow and ice at the culvert inlet and outlet, if necessary, before the freshet, to promote drainage during spring thaw and freshet.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	Use of a staggered culvert configuration.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	Regular inspection of the road to identify any areas where ponding of water along the road represents a risk, and installing additional culverts to alleviate the risk.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	• The channel has been designed to accommodate the 1:100 year design discharge, with an additional 0.3 m freeboard to reduce flooding potential.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	• The channel lining includes an underlying drainage layer, non-woven geotextile and surface lining of rip-rap, which has been designed for the 1:100 year design discharge.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	Culverts along the channel have been designed to accommodate the 1:100 year design discharge without surcharging.	Environmental Management/ Surface Hydrology
8.4.2.4.2 Secondary Pathways, Surface Hydrology	• The outlet conditions of Lake B0 will not be altered and the channel hydraulic gradient is designed to not cause backwater effects at Lake B0.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	The channel and culverts will be monitored and maintained to remove accumulated sediment and soil/rock fall material, and ice or snow blockages.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	The site water management system is designed to recycle water, where applicable, and reduce requirements for water withdrawal.	Water Quality / Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	• The Project will use existing raw water sources for the Ekati Mine, including Grizzly Lake, Little Lake, Falcon Lake, and Thinner Lake, to meet potable and raw water needs, and the LLCF for processing plant water needs; freshwater demand is not anticipated to increase as a result of the Project.	Environmental Management/ Water Quality/ Surface Hydrology
8.4.2.4.2 Secondary Pathways, Surface Hydrology	Potable water is currently trucked from Ekati to the Misery camp; no changes to this supply process are anticipated for the Project.	Environmental Management/ Water Quality
8.4.2.4.2 Secondary Pathways, Surface Hydrology	Raw water required for processing plant operations is recycled from the LLCF.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	Lake water levels in Grizzly Lake and other withdrawal waterbodies are monitored and managed according to the Ekati Mine Water Licence.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	The pumped discharge will be directed through an engineered diffuser.	Environmental Management/ Surface Hydrology
8.4.2.4.2 Secondary Pathways, Surface Hydrology	Discharge flow rates will be developed and maintained to minimize erosion concerns and reduce influence on surface ice.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	Temperature differential will be reduced by storing minewater in the Misery Pit, which is exposed to the same climate conditions as Lac du Sauvage, before release.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	• The diffuser will be located in a sufficient depth of water (currently anticipated to be approximately 8 m depth) with the ports directed at such an angle as to minimize the potential influence on surface ice.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	 Monitoring to allow for adaptive management, including a reduction in pumping rates if observed effects in flows and water levels are beyond the predicted effects detailed in the approved ICRP. 	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	The Ekati ICRP will be updated to include Project components.	Environmental Management/ Monitoring
8.4.2.4.2 Secondary Pathways, Surface Hydrology	Scheduled withdrawals from Upper Exeter Lake will be managed so that withdrawal rates and annual volumes withdrawn from source lakes do not cause adverse effects.	Environmental Management/ Surface Hydrology/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	 Runoff and minewater will be managed, and where practical, natural drainage courses will be used to reduce the need for constructed ditches and diversion berms. To reduce the potential for erosion in channels or backwatering due to higher than normal water flows and levels, natural drainage courses will be surveyed to evaluate capacity, and then modified, if required. 	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	 Erosion and sediment control practices (e.g., silt curtains) applicable to northern environments, and already in place at the Ekati Mine will be used during construction around disturbed areas, where necessary. 	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	Site drainage entering the diked area, will be collected and transferred to the Misery Pit.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• A diversion channel will be constructed for the outlet of the sub-basin B watershed to redirect its drainage away from the diked area so that it continues to flow into Lac du Sauvage.	Environmental Management/ Water and Sediment Quality/ Monitoring



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8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• A detailed dike construction plan will be developed and implemented for dike construction, and will include information relevant to mitigation, inspection, and monitoring.	Environmental Management/ Water and Sediment Quality
8.4.2.4.2 Secondary Pathways, Water and	• Erosion and sediment control measures will be implemented in Lac du Sauvage during dike construction where appropriate (e.g., installation of silt curtains) for turbidity control.	Environmental Management/ Water
Sediment Quality	 Turbidity (silt) curtains, consistent with those used at other mines, will be installed upstream of the dike (within Lac du Sauvage) and downstream of the dike (within the isolated portion of Lac du Sauvage) during the open-water seasons. 	and Sediment Quality/ Erosion / Monitoring
	 Deployment of turbidity curtains will not be possible during the winter; however, it is expected that ice cover will limit the extent of suspended sediment transport; enhanced TSS settlement is anticipated under-ice in the areas in close proximity to dike construction. 	
	 Turbidity and TSS will be monitored at designated locations throughout open-water and under-ice conditions, within and outside of the zone of the turbidity curtains. If TSS concentrations and turbidity approach monitoring thresholds during construction activities, a review of local conditions and activities will be conducted. 	
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• Non-potentially acid generating, chemically inert material (i.e., granite) will be used to construct the dike to prevent leaching of metals into water (Section 3.5.2.1).	Environmental Management/ Water and Sediment Quality/ Geochemical Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• The water level on the Lac du Sauvage side of the dike cannot be lowered to enable the breaching work to be carried out "in-the-dry." Therefore, water levels will be approximately equalized on both sides of the dike by back-flooding the dewatered area in a controlled manner (i.e., pumping) before dike breaching. This is a standard engineering approach for this nature of work.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• Water quality will be monitored during back-flooding to confirm that water quality within the back-flooded diked area will meet acceptability criteria before breaching of the dike.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• During excavation of the breaches, silt curtains or other sediment/turbidity mitigation measures will be utilized as necessary to reduce risks to water quality within Lac du Sauvage and within the diked area.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• The dike will be breached at several locations to approximately 2 to 3 m below the minimum water level at Lac du Sauvage. Excavated materials (crushed granite rock) will be locally placed to extend shallower areas on the residual sides of the dike and breaches.	Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• Turbidity and TSS will be monitored at designated locations throughout open-water and under-ice conditions, within and outside of the zone of the turbidity curtains. If TSS concentrations and turbidity approach monitoring thresholds during breaching activities, a review of local conditions and activities will be conducted.	Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• Excavated rockfill material will be placed, or other appropriate erosion mitigation will be installed as necessary to provide for long-term physical stability of the dike breach slopes.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	The pumped discharge of water from the diked area to Lac du Sauvage will be limited to water that meets pre-defined criteria for TSS.	Water and Sediment Quality/ Monitoring
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• The quality of the water pumped from the diked area will be regularly monitored to verify that it is acceptable for release to Lac du Sauvage. Where necessary, additional TSS mitigation may be used to limit the amount of TSS reporting to the zone that water in the diked area is pumped from. These mitigation measures may include the following:	Environmental Management/ Water and Sediment Quality/ Monitoring
	 increasing pumping rates during under-ice dewatering in later spring, when TSS concentrations are expected to be lower; 	
	 locating pump intakes in the deeper regions of the diked area; 	
	 installing graded rockfill zones around the pump intakes; and, installing site (web idit) contains and/or to file in the challenge of the dilated area to limit the gring file of TOO invested the grand the grand balance. 	
	- Installing slit (turbidity) curtains and/or battles in the shallow outer regions of the diked area to limit the migration of 155 inwards towards the pump intakes.	
8.4.2.4.2 Secondary Pathways, Water and Sediment Quality	• The footprint of the dike alignment has been designed to minimize the area required to access the Jay Pipe, and represents less than 5% of the Lac du Sauvage surface area.	Environmental Management/ Water and Sediment Quality/ Monitoring
8.5.3.2.1 Effects of project infrastructure and dike construction to flows, water levels, and channel/bank stability in downstream waterbodies	The footprint disturbance area for the Project will be limited to the extent practical for both the geographical and temporal scope. This includes using Ekati Mine infrastructure, where possible, to minimize the construction of new buildings, roads, and pads, building access roads as narrow as possible while maintaining safe construction and operation practices, and decommissioning and reclaiming disturbed areas during the closure phase or earlier.	Environmental Design and Mitigation
8.5.3.2.1 Effects of project infrastructure and dike construction to flows, water levels, and channel/bank stability in downstream waterbodies	The road route alignment will be designed to minimize stream crossings and avoid sensitive habitat where possible. Where feasible, crossings will be perpendicular to watercourses.	Environmental Design and Mitigation
8.5.3.2.1 Effects of project infrastructure and dike construction to flows, water levels, and channel/bank stability in downstream waterbodies	Culverts will be installed or upgraded, and monitored during all Project phases, along site access roads, as necessary, to use and maintain natural drainage patterns and reduce the use of ditches and diversion berms.	Environmental Design and Mitigation
8.5.3.2.1 Effects of project infrastructure and dike construction to flows, water levels, and channel/bank stability in downstream waterbodies	Adaptive Management Plans for the Ekati Mine KPSF operation discharges will be implemented, if necessary, based and the effects to water levels, flows, and channel stability downstream in Cujo Lake (Lake B4) and Christine (Lake B1) Outflow Stream, which are included in hydrometric monitoring locations under the Ekati Mine AEMP.	Environmental Management
8.5.3.2.1 Effects of project infrastructure and dike construction to flows, water levels, and channel/bank stability in downstream waterbodies	Defined limits/pumping conditions will remain within the capacity of the Lac du Sauvage Narrows and channel banks at the Lac du Sauvage Narrows will be monitored for evidence of erosion	Environmental Management / Monitoring



Section of the DAR	Commitment Description	Subject/Component
8.5.3.2.2 Effects of dewatering to flows, water levels, and channel/bank stability in downstream waterbodies	Pumped discharges will be conveyed to the lake environment, and not directly to outlets, to attenuate flow changes.	Environmental Management
8.5.3.2.2 Effects of dewatering to flows, water levels, and channel/bank stability in downstream waterbodies	Defined limits/pumping conditions will be developed as part of the Dewatering Plan to be submitted to the WLWB. The discharges will remain within the Lac du Sauvage outlet capacity, and channel banks at the Lac du Sauvage outlet channel will be monitored for evidence of erosion.	Monitoring
8.5.3.2.2 Effects of dewatering to flows, water levels, and channel/bank stability in downstream waterbodies	The Sub-basin B Diversion Channel will be designed to divert 1:100-year rainfall on snowmelt peak flow from the reporting catchment area.	Surface Hydrology /Environmental Management
8.5.3.2.2 Effects of dewatering to flows, water levels, and channel/bank stability in downstream waterbodies	Defined limits/pumping conditions will remain within the capacity of the Lac du Sauvage Narrows and channel banks at the Lac du Sauvage Narrows will be monitored for evidence of erosion.	Surface Hydrology / Environmental Management
8.5.3.2.3 Effects of operations to flows, water levels, and channel/bank stability in downstream waterbodies	Water seeping from the WRSA during the construction and throughout operations will be monitored as part of the established WRSA Seepage Monitoring Program such that management actions can be implemented if necessary.	Monitoring / Environmental Management
8.5.3.2.3 Effects of operations to flows, water levels, and channel/bank stability in downstream waterbodies	During the early operations phase, seepage water entering the diked area from Lac du Sauvage will be collected in the runoff sump and pumped to the Misery Pit. This could cause a reduction water levels and discharge at the Lac du Sauvage outlet. The dike construction will mitigate this effect by allowing very small amounts of seepage relative to the volume of Lac du Sauvage.	Design
8.5.3.2.3 Effects of operations to flows, water levels, and channel/bank stability in downstream waterbodies	Operational discharge to Lac du Sauvage will be directed through a properly designed structure (i.e., engineered submerged diffuser) to prevent erosion and sediment resuspension in the receiving waterbodies.	Design
8.5.3.2.3 Effects of operations to flows, water levels, and channel/bank stability in downstream waterbodies	Defined limits/pumping conditions for the operational discharge will remain within the capacity of the Lac du Sauvage Narrows and channel banks at the Lac du Sauvage Narrows will be monitored for evidence of erosion.	Environmental Management /Monitoring
8.5.3.2.4 Effects of back-flooding to flows, water levels, and channel/bank stability in downstream waterbodies	Back-flooding of the dewatered area will be carried out in a manner that provides a controlled flow of water to protect source water and downstream areas against adverse impacts. Specifically, this includes limiting impacts on fish and fish habitat during back-flooding and impacts on Lac du Sauvage and Lac de Gras in terms of water level and local hydrological regime.	Environmental Management/ Surface Hydrology
8.5.3.2.4 Effects of back-flooding to flows, water levels, and channel/bank stability in downstream waterbodies	Therefore, pumping rates may be reduced during winter months if necessary to reduce the effects on the downstream watershed. Reduced transfer rates may be required to limit impacts on the downstream hydrological regime during low flow months.	Environmental Management/ Surface Hydrology
8.5.3.2.4 Effects of back-flooding to flows, water levels, and channel/bank stability in downstream waterbodies	Further modelling will be completed for the regulatory and final design processes that follow completion of environmental assessment to indicate whether reduced transfer rates will be required at certain times to limit impacts on the downstream hydrological regime during low flow periods and also that increased transfer rates are possible during freshet or high flow periods. This will be conducted with support from fish and fish habitat specialists to identify strategies that could be implemented to reduce impacts of closure back-flooding to key components, such as maintenance of fish passage, rate of change in water depths from later summer to winter, and changes to extension of lake surface area (due to changes in water level) (Mine Water Management Plan; Appendix 3A)	Environmental Management/ Surface Hydrology
8.5.3.2.5 Effects of post-closure to flows, water levels, and channel/bank stability in downstream waterbodies and streams	In the post-closure period, Project infrastructure will be reclaimed according to the methods described in the Ekati Mine ICRP (BHP Billiton 2011), including the removal of stockpiles, buildings, roadway safety berms and culverts, and natural colonization for the re-vegetation of roadway and WRSA surfaces. These activities are expected to return basin snowmelt and rainfall runoff coefficients to pre-Project coefficients. In addition, the Sub-Basin B Diversion Channel will be decommissioned and re-graded to promote a return to natural flow regimes.	Reclamation/ Design
8.5.3.2.5 Effects of post-closure to flows, water levels, and channel/bank stability in downstream waterbodies and streams	The Sub-Basin B Diversion Channel will be re-graded to promote drainage through the natural drainage pattern to Lac du Sauvage once the water quality in the back-flooded area meets closure criteria for discharge. The reclaimed diversion channel will be made safe for movement of wildlife, particularly caribou, and people.	Reclamation / Water Quality / Design
8.5.3.2.5 Effects of post-closure to flows, water levels, and channel/bank stability in downstream waterbodies and streams	Jay WRSA was designed to be inherently, physically stable structure, both during mine operations and in the long term. It was designed and it will be constructed to minimize runoff and encourage permafrost formation through placement sequence of materials. The intent is that any water infiltrating the waste rock will encounter permafrost conditions and freeze within the pile. This will limit leaching to the outer surface of the waste rock (i.e., the active layer).	Reclamation/ Design
8.5.3.2.5 Effects of post-closure to flows, water levels, and channel/bank stability in downstream waterbodies and streams	The Ekati Mine ICRP (BHP Billiton 2011) works to facilitate and promote the natural colonization of disturbed areas and the reclamation objectives reflect the local native vegetation communities. Although active revegetation is not currently planned for the Project footprint, revegetation may be completed in the LLCF and in other critical areas as required. For example, reclamation of shoreline and shallow areas within the diked area will include localized repair of erosion and revegetation with aquatic and riparian plants, as necessary. Stored soil materials will be used in critical areas to improve the growth medium, and therefore aid in recovery of plant populations and communities. Monitoring of re-vegetation techniques and success for reclamation will be continued during the Project as part of the ICRP and lessons-learned will be applied to reclamation of the Jay Project components.	Reclamation
8.5.3.3.3 Environmental Design Features and Mitigation	Back-flooding of the pits will be carried out in a manner that provides a controlled flow of water to protect source water and downstream areas against adverse impacts. Specifically, this includes limiting impacts on fish and fish habitat during back-flooding and impacts on Lac de Gras in terms of water level and local hydrological regime. The back-flooding of Ekati Mine pits will be completed in accordance to approved withdrawal rates (during open water season, June to October) from source lakes as described in the 2011 Ekati ICRP (BHP Billiton 2011) and 2013 Ekati Closure and Reclamation Progress Report (Dominion Diamond 2013). In addition, the back-flooding of the Diavik pits is expected to be completed in accordance with the rates and timing approved in the 1998 Diavik EA or other regulatory guidance.	Design/ Environmental Management /Surface Hydrology



Section of the DAR	Commitment Description	Subject/Component
8.5.4.1.2 Water Quality in Lac du Sauvage and Lac de Gras during Operations and Post-closure	Dominion Diamond will monitor minewater in Misery Pit throughout operations. If testing indicates that minewater in the Misery Pit is acutely toxic, it will not be released to Lac du Sauvage. Data collected in early operations, as Misery Pit fills, provides an opportunity to test model predictions and to develop adaptive management responses, if necessary. Minewater will not be released to Lac du Sauvage if it is acutely toxic.	Monitoring/ Environmental Management/ Adaptive Management
8.5.4.1.2 Water Quality in Lac du Sauvage and Lac de Gras during Operations and Post-closure	Treated sewage effluent will not be directly released to the receiving environment through the Misery Pit minewater discharge but will be incorporated into the minewater in the LLCF and released to Lac de Gras through the Koala watershed.	Water Quality/ Environmental Management
8.5.5.3.2 Results	Vanadium concentrations in fish tissue and water during operations and closure phases of the Project will be monitored to confirm assessment predictions.	Monitoring /Aquatic Health
8.5.5.4 Effects of Minewater Quality on Aquatic Health at Point of Discharge	Monitoring in the Misery Pit including chemical analyses and toxicity testing will be conducted during the operations period, even before discharge in 2024, through to the end of operations to monitor the rate of TDS increase in the Misery Pit, and to enable appropriate adaptive management actions, should they be required, to protect the aquatic receiving environment against significant adverse effects.	Monitoring/ Adaptive Management
8.5.6.1.1 Construction Phase	Defined limits/pumping conditions will remain within the capacity of the Lac du Sauvage Narrows, and channel banks at the Lac du Sauvage outlet channel will be monitored for evidence of erosion. Monitoring of Lac du Sauvage water levels and discharge will be completed under the Project AEMP to assess surface hydrology effects and to provide input into a potential adaptive management plan if necessary.	Monitoring/ Environmental Management
8.5.6.2.3 Aquatic Health	Monitoring including receiving environment water chemistry and fish tissue chemistry will be conducted to confirm the water and tissue predictions, particularly for aluminum and vanadium. Based on the above results, changes to concentrations of all substances considered in this assessment are predicted to result in negligible effects to aquatic health in Lac du Sauvage and Lac de Gras.	Monitoring/ Aquatic Health
8.5.6.2.3 Aquatic Health	Simulated Misery Pit minewater testing suggests that maximum predicted TDS concentrations of water to be pumped to Lac du Sauvage in Years 5 to 10 of operations is not likely to be acutely toxic. Thus, acute localized effects to aquatic life at the point of discharge into Lac du Sauvage are not expected. However, minewater monitoring (i.e., constituent chemistry and toxicity testing) will be conducted in the Misery Pit before, and during, discharge to provide an early warning as to whether this could occur, such that appropriate management actions can be taken to prevent any release of acutely toxic effluents.	Monitoring / Aquatic Health
8.6.1.1 Pit inflow Volumes	Dominion Diamond will conduct monitoring and testing using standard field and laboratory procedures during the Project operation to evaluate groundwater quantity and quality. Where necessary, the water chemistry and quantity input profiles assigned to the loadings for groundwater will be revised and minewater predictions will be updated, as appropriate. Where required, adaptive management strategies will be adopted.	Hydrogeology/ Monitoring / Adaptive Management
8.6.3.1 Adequacy of Water Quality Data	Once the Project is operational, monitoring of water quality and periodic re-assessment of effects predictions based on measured data will be required.	Water Quality/ Monitoring
8.6.3.3 Deposition of Air Emissions, Dust, and Metals to Lakes in the Lac du Sauvage and Lac de Gras Watersheds	Dominion Diamond will develop and execute ambient air quality monitoring programs as appropriate to validate that the predicted concentrations from the Project are conservative and to assist in managing that the Project emissions are kept to a reasonable level.	Air Quality/ Monitoring
8.8 Follow-up and Monitoring	These monitoring programs form part of the environmental management system for the Project. If monitoring results indicate effects that are different from predicted effects, or the need for improved or modified design features and mitigation, then adaptive management will be implemented. This may include increased monitoring, changes in monitoring plans, or additional mitigation. In addition, special studies, which are studies proposed with the intent to supplement the primary monitoring programs, address potential data gaps, and support future monitoring, may be considered.	Monitoring/ Adaptive Management
8.8.1 Groundwater	Monitoring will occur at the onset of development to determine the response of the environment to the disturbance by mining. The hydrogeological conditions will be monitored for changes throughout each phase of the Project, and will include the following:	Hydrogeology/ Monitoring
	implement established quality assurance/quality control measures for data acquisition, groundwater sampling, and analysis;	
	monitor groundwater inflow quantity and quality to the open pit;	
	 monitor hydraulic heads and groundwater quality at designated depths in the Westbay well; and, 	
	undertake data and information assessment.	
8.8.1 Groundwater	Water seepage from the WRSA during the construction and throughout operations will be monitored as part of the established Ekati Mine WRSA seepage monitoring program. The data will be considered in the groundwater monitoring program, and if unexpected results are observed (i.e., potential to affect groundwater), revisions to the groundwater monitoring program will be made.	Hydrogeology/ Monitoring
8.8.2 Water Quantity	Upon approval of the Project, surface hydrology monitoring, both at the Project site and in the receiving environment, will be implemented.	Surface Hydrology/ Monitoring
8.8.2 Water Quantity	An SNP and an AEMP will be the basis of environmental monitoring. These programs will be implemented during all Project phases, including post-closure. Monitoring will include hydrological data collection at locations within the Project footprint, and at locations within the Lac du Sauvage and Lac de Gras watersheds. These sites and parameters are recommended to include water levels and outlet discharges at Lakes AC35, B1 and/or B0, C1, and Lac du Sauvage. These monitoring programs are intended to track the hydrological conditions during the phases of the Project. They will support verifying the effects predictions for lake water levels, discharges, and basin connectivity, identify additional unanticipated effects and provide information for the implementation of adaptive management plans.	Surface Hydrology/ Monitoring
8.8.2 Water Quantity	Long-term monitoring to verify effects predictions and provide updates on the hydrological environment will be required. The following actions are required to determine that a pre-Project aquatic ecosystem is being re-established:	Surface Hydrology/ Monitoring
	monitor Lac du Sauvage water levels and discharges through closure and post-closure;	
	verify that predevelopment watershed connections are re-established; and,	
	verify closure and post-closure effects predictions	
8.8.2 Water Quantity	Post-closure monitoring programs will be implemented to confirm that closure objectives are being met. As outlined in the Mackenzie Valley Land and Water Board (MVLWB) and Aboriginal Affairs and Northern Development Canada (AANDC), <i>Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories</i> (2013) if it is determined that the closure objectives are not met for individual project components, the proponent will need to implement ongoing monitoring, maintenance measures, and possibly contingency plans. Once the surface hydrology closure criteria are met, monitoring for the reclamation of the surface water components may be ceased and no long-term active care will be required.	Surface Hydrology/ Monitoring
8.8.2 Water Quantity	The post-closure hydrological monitoring will be performed to determine adequate connectivity between high priority basins (e.g., connection of Stream B0 to Lac du Sauvage) surrounding the Project site. This is quantified by observing that the required water elevations and discharges to sustain aquatic life are maintained. A discussion of the site-specific requirements will be presented in the Project AEMP Design Plan.	Surface Hydrology/ Monitoring



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8.8.2 Water Quantity	Future monitoring will assess the validity of effects predictions and the effectiveness of mitigation. The collected surface hydrology data will be used in water quality, fish and fish habitat, and traditional land use assessment endpoints to determine if action is required based on their methods. Any variations from predicted effects will indicate the need for additional mitigation and monitoring. In that case, an adaptive management plan will be developed.	Surface Hydrology/ Monitoring
8.8.3 Water Quality	Upon approval of the Project, water quality monitoring, both on the mine site and in the receiving environment, will be implemented. This monitoring will be conducted under several programs that will be requirements of the Project's Type A Water Licence, and include an SNP, which will require monitoring within the Project boundary and Project discharges, and an AEMP, which will require monitoring in the receiving environment.	Water Quality/ Monitoring
8.8.3 Water Quality	A conceptual minewater monitoring plan is provided in Appendix 3A (Mine Water Management Plan) and will be expanded into a detailed construction and operational plan during the permitting phase. The detailed plan will include information on sampling stations and analysis of minewater. Sample analysis will include measurement indicators consistent with those undertaken in baseline monitoring, and will also include toxicity testing. Potential SNP locations will include the Misery Pit, end of pipe before release to the receiving environment, Jay Pit, Sub-Basin B Diversion Channel, and drainage from the Jay WRSA.	Water Quality/ Monitoring
8.8.3 Water Quality	After minewater is released to the environment, water in the receiving environment will be monitored through the AEMP. A conceptual AEMP is included in Appendix 9C; however, the detailed AEMP design will be developed during the permitting phase of the Project. The AEMP for the Project will build upon the existing AEMP for the Ekati Mine (e.g., ERM Rescan 2014), as well as the Diavik Mine (DDMI 2014); these AEMPs include sampling locations in Lac de Gras and the Koala watershed, as well as other locations in the effects study area. It is anticipated that components of the AEMP specific to this KLOI will include: minewater characterization (i.e., physical, chemical, and toxicological characteristics); discharge plume modelling in Lac du Sauvage and Lac de Gras; water quality in Lac du Sauvage and Lac de Gras (and small lakes within the Project area for air emissions deposition monitoring); and reference lakes. It is anticipated that the AEMP will also include sediment quality in Lac du Sauvage and Lac de Gras (and small lakes within the Project area for air emissions deposition monitoring), and reference lakes. Monitoring will be multi-phased, occurring during construction, operations, closure, and post-closure and occur on a seasonal basis (e.g., late winter, summer). Monitoring for water and sediment quality will be complex in terms of sampling locations, sampling frequencies, and sampling constituents with efficient alignment between programs such that linkages can be made between activities at the mine and changes or responses in the aquatic environment.	Water Quality/ Monitoring
8.8.3 Water Quality	Monitoring details for sampling locations, sample depth collection (i.e., surface, mid-column, or bottom), sampling frequency, and the list of measurement indicators for the water and sediment quality monitoring component for the AEMP will be developed through careful consideration and reference to guidance documentation that may include AEMP designs from other northern mines (i.e., Ekati and Diavik mines) and resources such as <i>Guidelines for Designing and Implementing Aquatic Effects Monitoring Programs for Development Projects in the NWT</i> (AANDC 2009). The final design plan for the Project AEMP will be determined through the permitting process and detailed planning, which will include consultation and engagement with regulatory agencies and Aboriginal parties.	Water Quality/ Monitoring
8.8.3 Water Quality	These constituents include at a minimum those that are in the current Ekati Mine Water Licence (W2012L2-0001). Not all constituents need to be measured at every station on every sampling event. These details will be refined through the water licencing permitting process.	Water Quality/ Monitoring
8.8.3 Water Quality	An additional requirement of water quality monitoring will be to develop an approach to differentiate between load contributions to Lac de Gras from existing development (Ekati and Diavik mines), and that from the Project.	Water Quality/ Monitoring
8.8.3 Water Quality	Existing monitoring data, plus measured loads (i.e., concentration times volume), from each existing mine will be investigated to identify key constituents that may be used to differentiate between contributions from the existing mines and potential changes to aquatic life in Lac de Gras.	Water Quality/ Monitoring
8.8.3 Water Quality	The design of the AEMP will be developed with input from regulators and other interested parties and will consider Traditional Knowledge, and traditional use of the landscape.	Water Quality/ Monitoring
Section 9	Key Line of Inquiry: Fish and Fish Habitat	
9.2.2 Fish and Other Aquatic Life	A sampling program in 2014 was also carried out in Lac du Sauvage, Lac de Gras, and several Lac du Sauvage area lakes and streams to collect additional baseline data on fish and fish habitat to support the analysis of mine-related effects, and to aid in developing a monitoring program in Lac du Sauvage for the proposed Jay Project. The results of these field programs will be reported in supplemental baseline reports to be issued in 2015.	Fish and Fish Habitat/ Monitoring
9.3.2.1.1 Blasting	 Mitigation measures will be implemented to minimize the effects of blasting in the Jay open pit on fish VCs in nearby waterbodies (i.e., Lac du Sauvage). All applicable Fisheries and Oceans Canada (DFO) recommended measures to avoid causing harm to fish from the use of explosives (DFO 2014b) will be considered when necessary to protect fish, and may include the following: avoiding the use of explosives in water; minimized blast charge weights and subdivided charges into a series of smaller charges in blast holes, with a minimum 25 millisecond delay between charge detonations; back-filling blast holes to grade with sand or gravel to confine blasts; placement of blasting mats over tops of blast holes to minimize scattering of blast debris; avoiding the use of ammonia nitrate based explosives to avoid the production of toxic by-products; and, removal of all blasting debris and associated materials from the blast area. 	Fish and Fish Habitat /Mitigation



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9.3.2.1.1 Fish Screens	All measures recommended by DFO to avoid causing harm to fish at screened water intake pipes (DFO 2014b) will be considered as potential mitigation to minimize entrainment and impingement of fish, and may include the following:	Fish and Fish Habitat /Mitigation
	 the screened intake and outlet located in areas and at depths with low fish concentrations throughout the year; 	
	screens located away from natural or artificial structures that may attract fish that are migrating, spawning, or in rearing habitat;	
	openings in the guides and seals less than the opening criteria to make "fish tight";	
	screens located a minimum of 300 mm above the bottom of the waterbody to prevent entrainment of sediment and aquatic organisms associated with the bottom area;	
	 screens designed with structural support that prevents the screen panels from sagging and collapsing; 	
	 if using a large cylindrical or box-type screen, a manifold installed to ensure even water velocity distribution across the screen surface. The ends of the structure made out of a solid material and the end of the manifold will be capped; and, 	
	regular cleaning, maintenance, and repair of screens carried out to prevent debris-fouling and impingement of fish. Pumps shut down when screens removed.	
9.3.2.1.1 Fish Screens	All guidelines will be considered in design, installation, and maintenance of fish screens on intake pipes for the Project.	Fish and Fish Habitat / Design
9.3.2.1.1 Fish Screens	Final details for design and implementation of DFO Guidelines will be finalized in discussion with DFO.	Fish and Fish Habitat / Design
9.3.2.1.3 Diversion Channel	A diversion channel (Sub-Basin B Diversion Channel) will be constructed (approximately 1,275 m in length) to divert water that originally flowed from Sub-basin B into the dewatered portion of Lac du Sauvage, away from the pit and into the area of Lac du Sauvage outside of the dewatered area. The diversion channel will convey water from two fish-bearing streams, Stream B0 downstream of Christine Lake and Stream Ac35, a small ephemeral stream downstream of Lake Ac35. The diversion channel will be designed as a mitigation measure to facilitate fish passage to upstream locations.	Fish and Fish Habitat / Design
9.3.2.1.3 Diversion Channel	To prevent potential barriers to fish passage at any of the proposed road crossings of the channel or upstream, culverts will be designed and installed in such a manner to maintain adequate flows and velocities for fish passage, using appropriate federal and territorial guidelines (e.g., Government of Alberta 2009; DFO 2014b).	Fish and Fish Habitat /Design
9.3.2.1.3 Diversion Channel	The following maintenance activities will be considered for the life of the mine to further support the success of the diversion channel in providing fish passage:	Fish and Fish Habitat / Design/
	regular inspection and maintenance of outlet channels and culverts to remove accumulated sediment and soil/rock fall material;	Mitigation
	• inspection of culvert inlets and outlets for ice and snow build-up before freshet, and removal of any accumulated ice and/or snow; and,	
	repair of damaged channel linings immediately to limit the potential for erosion and breach of channels.	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The Project footprint disturbance area will be limited to the extent practical	
Pathways for Effect to Fish and Fish Habitat	Design of the Jay Project minimizes the construction of new buildings, roads, pads, or excavations	
	• Where possible, road crossing construction in areas of potential spawning habitat will take place outside the spawning period for Arctic Grayling (approximately early May to mid-June)	
	• Erosion and sediment control management practices (e.g., silt fences, runoff management) applicable to northern environments and already in place at the Ekati Mine will be used during construction around	
	disturbed areas, where appropriate	Fish and Fish Habitat/ Design/
	Ruhon and seepage from Project facilities will be managed where appropriate	Environmental Management/ Mitigation
	 Access roads will be as parrow as possible, while maintaining safe construction and operation practices. 	
	 The road route alignment will be designed to minimize stream crossings and avoid sensitive babitat as feasible; where feasible, crossings will be perpendicular to watercourses 	
	 Where practical natural drainage patterns will be used to reduce the use of ditches and diversion berms 	
	 The Project footprint will be reclaimed at closure according to the approved Closure Plan 	
9.3.2.2 Pathway Screening Table 9.3-1 Potential	Standard practices of erosion and sediment control (e.g., silt curtains, runoff management) already in use at the Ekati Mine will be used during construction around disturbed areas, where appropriate	
Pathways for Effect to Fish and Fish Habitat	 Monitoring programs will be implemented to provide information to prompt corrective action if necessary 	
	• Where possible, road crossing construction in areas of potential spawning habitat will take place outside the spawning period for Arctic Grayling (approximately early May to mid-June)	Fish and Fish Habitat/ Environmental
	Instream works will either be avoided or limited to when watercourses are not flowing, where possible	Management/ Miligation / Monitoring
	Runoff from facilities will be managed where appropriate to settle out suspended sediments before release	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The road route alignment will minimize stream crossings and avoid sensitive habitat as feasible	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	Culverts will be designed to allow for fish passage where appropriate	Environmental Management/
	Cross-drainage structures will be designed and constructed such that structures will provide a design conveyance for the 1:50 year event without overtopping the roadway	Mitigation/ Monitoring
	Regular inspections of roads and cross-drainage structures will be performed	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	A detailed dike construction plan will be developed and implemented	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	• Erosion and sediment control measures will be implemented in Lac du Sauvage during dike construction where appropriate (e.g., installation of silt curtains for turbidity control)	Environmental Management/ Mitigation
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	A diversion channel will be constructed to maintain habitat corridors between Lac du Sauvage and waterbodies in the sub-basin B and Ac35 area	Fish and Fish Habitat/ Design/ Environmental Management/ Mitigation
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	A diversion channel will be constructed to maintain habitat connections for target fish species between Lac du Sauvage and the sub-basin B and Ac35 area	Fish and Fish Habitat/ Design/ Environmental Management/ Mitigation



Section of the DAR	Commitment Description	Subject/Component
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The spatial extent of the mine footprint will be minimized, where possible	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	An offsetting plan will be developed with Fisheries and Oceans Canada (DFO) and with engagement of the local Aboriginal communities	Environmental Management
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The diversion channel will be constructed to maintain habitat connections for target fish species between Lac du Sauvage and the sub-basin B and Ac35	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	The diversion channel will be in place for operations only, and at closure, the natural stream channel will be re-established	Environmental Management/ Mitigation
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The dike will be constructed using granite rock and will not contain any potentially acid-generating rock or metal leaching material	Fish and Fish Habitat/ Design
Pathways for Effect to Fish and Fish Habitat	Bentonite and other materials used for dike construction are sequested within the central core of the dike	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	A Fish-Out Plan will be developed and the fish-out will occur according to DFO guidance and with active participation of the local Aboriginal communities	Fish and Fish Habitat/ Environmental Management/
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	A diversion channel will be constructed to divert flows and fish migrating downstream to Lac du Sauvage	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	The spatial extent of the mine footprint will be minimized, where possible	Environmental Management
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	• The pumped discharge of water from the diked area to Lac du Sauvage will be limited to water that meets regulated water discharge criteria for total suspended solids (TSS)	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	Discharge water will be regularly sampled and monitored as part of the Dewatering Plan to enable corrective actions if necessary	Environmental Management/
	 If suspended solids concentrations are too high for the direct release of water to the natural environment, the water will be pumped to the Lynx or Misery pits 	Wollioning
	 Discharge will be directed through properly designed structures to the lake environment to prevent erosion and sediment entrainment in the receiving waterbodies 	
	The diffuser will be engineered to avoid excess sediment mobilization and turbulence	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	 A Dewatering Plan will be prepared for the Wek'èezhii Land and Water Board (WLWB) that will include locations for flow rates and water quality monitoring to meet regulatory requirements and enable corrective action if necessary 	Fish and Fish Habitat/ Design/ Environmental Management/
	Discharge water will be regularly sampled and monitored as part of the Dewatering Plan	Monitoring
	Direct discharge flow rates will be developed and maintained to eliminate potential for erosion	
	Channel banks at the Lac du Sauvage and Lac de Gras outlet channels will be monitored for evidence of erosion	
	Defined limits/pumping conditions will remain within Lac du Sauvage outlet capacity	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	A Dewatering Plan will be prepared for the WLWB that will include locations and water quality monitoring to meet regulatory requirements and enable corrective action if necessary	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	Discharge water TSS concentrations will be regularly sampled and monitored as part of the Dewatering Plan	Environmental Management
	If suspended solids concentrations are too high for the direct release of water to the natural environment, the water will be pumped to Lynx or Misery pits	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The spatial extent of the mine footprint will be minimized, where possible	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	An offsetting plan will be developed in consultation with DFO and with engagement of the local Aboriginal communities	Environmental Management/
	The diked area will be back-flooded at closure and the area will be accessible for use by fish upon breaching of the dike	Lingagement
	The rock slopes of the residual sections of dike that remain in the lake for closure may provide habitat for fish	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	 Blasting operations will follow DFO's "Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters" (Wright and Hopky 1998) for setback distances from fish-bearing waterbodies Blasting and excavation will occur in the dewatered areas of Lac du Sauvage where no water or fish will be present 	Fish and Fish Habitat/ Environmental Management/ Mitigation
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The dike alignment has been designed to minimize the area within Lac du Sauvage as practicable and represents less than 5% of the Lac du Sauvage surface area	Fish and Fish Habitat/ Environmental
Pathways for Effect to Fish and Fish Habitat	The water management plan was developed to minimize effects to hydrologic conditions	Management/ Design
	Defined limits/pumping conditions will remain within Lac du Sauvage outlet capacity	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	The mine footprint will be minimized where possible	Design
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The Project will use existing potable water system at site; demand is not anticipated to increase beyond the currently authorized amounts	Fish and Fish Habitat/ Environmental
Pathways for Effect to Fish and Fish Habitat	• Freshwater for Ekati Mine operations is permitted to be drawn from Grizzly Lake, Little Lake, Thinner Lake (Misery Camp); the Long Lake Containment Facility provides recycled water for operation of the	Management
	processing plant	
	Potable water is trucked from the Ekati Mine to the Misery camp	
	Raw water required for processing plant operations is taken from the Long Lake Containment Facility, where the fine tailings have settled and clear water is available	
	Site water management system is designed to recycle water, where practicable	
	Water withdrawal rates will be controlled to avoid adverse effects on the source water lakes	



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9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	 Operating procedures for equipment and Project activities will be developed and adhered to reduce the potential for dust generation and air emissions (e.g., regular maintenance of equipment, use of low- sulphur diesel fuel) 	Fish and Fish Habitat/ Environmental Management/ Mitigation
	Regular maintenance of equipment utilized for the Project will continue at the Ekati and Misery sites	
	Dust suppression measures will be applied as appropriate to haulage roads, airstrip, laydown areas	
	Speed limits will be established on all roads to reduce production of dust	
	Equipment and vehicles will be equipped with industry-standard emission control systems	
	Conveyance and processing facilities will be enclosed	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	• During pumping of water from areas that contain fish, appropriately sized fish screens that meet DFO guidelines will be fitted to pumps to limit fish impingement and entrainment	Fish and Fish Habitat/ Design/ Environmental Management/ Mitigation
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	• Rock mined from the Jay open pit will be managed according to established procedures (i.e., thermal cover over metasediment rock) to limit acidic seepage from these facilities	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	Rock used to construct the dikes will be non-acid generating	Environmental Management/ Mitigation
	Seepage management will be addressed as described in the Waste Rock and Ore Storage Management Plan (regular monitoring and adaptive management actions as necessary)	
	Minewater will be collected and managed	
	 Appropriate explosive management practices (e.g., storage and handling controls, spill and waste management, blast design efficiency, minimize overloading, minimizing misfires) will be undertaken on site, consistent with practices already in place at the Ekati Mine 	
	Use of Misery Pit allows for minewater to be stored and not discharged until Year 5 of operations	
	Operational discharge will meet water quality discharge criteria	
	Discharge water will be regularly sampled and monitored	
	• Water and sediment quality in the receiving waterbodies will be monitored under the Aquatics Effects Monitoring Program, enabling adaptive management actions if necessary	
	The pumped discharge will be directed through a properly designed diffuser to prevent erosion	
	Discharge flow rates will be developed and maintained to eliminate erosion concerns	
	The diffuser discharge ports will be located above the lake bed to minimize erosion	
	The diffuser will be located in a sufficient depth of water with the ports directed at such an angle as to minimize the potential influence on surface ice	
	 Sewage from the Jay/Misery sites will be trucked to the main camp sewage facility where the existing enclosed sanitary sewage treatment plant treats all domestic wastewater to primary and secondary levels of treatment 	
	Treated effluent from the sewage treatment plant is pumped to the processing plant and discharged to the Long Lake Containment Facility as per existing Ekati operations	
	• Fine processed kimberlite will be managed at existing Ekati facilities (deposited into mined-out Panda and Koala open pits with minewater from the processing plant pumped to the Long Lake Containment Facility during operations)	
	 The Ekati Mine Wastewater and Processed Kimberlite Management Plan, which already anticipates the use of Panda and Koala open pits for fine processed kimberlite deposition, will be updated to incorporate the Project 	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The pumped discharge will be directed through a properly designed diffuser to minimize effects from changes in velocity	Fish and Fish Habitat/ Design/
Pathways for Effect to Fish and Fish Habitat	Direct discharge flow rates will be developed and maintained to address erosion concerns	Environmental Management/ Mitigation
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	During pumping of water from areas that contain fish, appropriately sized fish screens that meet DFO guidelines will be fitted to pumps to limit fish impingement and entrainment	Fish and Fish Habitat/ Design/ Environmental Management/ Mitigation
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	Back-flooding rates and volumes will be managed to minimize effects in source waterbodies and downstream	Fish and Fish Habitat/ Environmental Management/ Mitigation
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	The Project will be included in the Ekati Interim Closure and Reclamation Plan; this plan will be updated as per regulatory requirements through operations and adhered to through closure	Fish and Fish Habitat/ Environmental
Pathways for Effect to Fish and Fish Habitat	Water quality monitoring will be conducted during the refilling period	Management/ Monitoring
	The dike will not be breached to provide connectivity to Lac du Sauvage until water quality meets acceptability criteria	
9.3.2.2 Pathway Screening, Table 9.3-1 Potential	Disturbed areas will be reclaimed and the surface stabilized for closure	Fish and Fish Habitat/ Reclamation/
Pathways for Effect to Fish and Fish Habitat	 Erosion and sediment control management practices, applicable to northern environments, will be implemented where appropriate 	Environmental Management
	 A closure plan will be developed which will include management of dike breaching / removal activities to limit the potential for effects on the environment 	
	Breaching and removal of dikes will only occur when water guality within the diked area meets acceptability criteria	
	Drainage patterns will be re-established where practicable, including the Sub-Basin B Diversion Channel	
		1



Section of the DAR	Commitment Description
Section of the DAR 9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat 9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	Commitment Description At closure, natural water levels in Lac du Sauvage will be re-established, restoring the natural groundwater flow gradient towards the lake Water quality in the refilled area will meet acceptability criteria before the dike is breached to allow a reconnection with the main Lac du Sauvage basin At the completion of mining of the Jay pipe, a portion of the minewater contained within the Misery Pit will be pumped to the bottom of the Jay Pit and the Jay and Misery pits will from Lac du Sauvage The water quality in the Misery Pit will meet acceptability criteria before reconnection with Lac de Gras The Panda and Koala open pits will be reclaimed by pumping freshwater into the pits as a 'cap' (about 30 m deep) overlying the fine processed kimberlite Scheduled withdrawals will be managed so that combined withdrawal rates in source lakes (for all Jay, Ekati, and Diavik activities) do not cause significant adverse effects to fish as described in the Ekati Interim Closure and Reclamation Plan (ICRP) Metasediment rock will be encapsulated within a 5 m thick encapsulating cover of granite to prevent seepage that would cause negative effects in the receiving environment The Panda and Koala open pits will be reclaimed by pumping freshwater into the pits as a 'cap' (about 30 m deep) overlying the fine processed kimberlite The Panda and Koala open pits will be managed so that combined withdrawal rates in source lakes (for all Jay, Ekati, and Diavik activities) do not cause significant adverse effects to fish as described in the Ekati Interim Closure and Reclamation Plan (ICRP) Metasediment rock will be encapsulated within a 5 m thick encapsulating cover of granite to prevent seepage that would cause negative effects in the receiving environment The Panda and Koala open pits will be reclaimed by pumping freshwater into the pits as a 'cap' (about 30 m deep) overlying the fine processed kimberlite The Panda and Koala open pits will be reclaimed by pumping freshwater into the pits as a 'cap' (about 30 m de
	 The Ekati Interim Closure and Reclamation Plan will be updated to include Project components The volume of freshwater required to flood the Panda/Koala pits at closure is much less under the Jay Project than the volume currently authorized through the ICRP, representinenvironmental risks to source lake(s) Scheduled withdrawals will be managed so that combined withdrawal rates in source lakes (for all Jay, Ekati, and Diavik activities) do not cause negative impacts in the source lake ICRP
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	 The Ekati Interim Closure and Reclamation Plan will be updated to include Project components Natural drainage patterns will be re-established as practicable for closure
9.3.2.2 Pathway Screening, Table 9.3-1 Potential Pathways for Effect to Fish and Fish Habitat	 A Spill Contingency Plan is in place for the Ekati Mine and will incorporate the Jay Project Regular equipment maintenance (e.g., regular checks for leaks) Drip trays and/or absorbent pads are used during servicing and refuelling All hazardous substances are stored and handled on site in accordance with applicable regulations Fuel is stored at central bulk fuel farms and fuel tanks are housed within bermed areas The Project will follow standard policies used at the Ekati mine in the event of a spill; spill response training is provided and updated Hydrocarbon impacted material will continue to be handled in accordance with the approved management plan
9.3.2.2.1 Pathway with No Linkage, Spills (i.e., fuels, petroleum products, reagents) on site may cause a change in surface water quality, affecting fish and other aquatic life	Mitigations and management identified in Ekati's existing Wastewater and Processed Kimberlite Management Plan (WPKMP) and environmental design features will be in place to lin failure. The integrity and performance of the pumping and pipeline systems will be monitored throughout the Project construction and operations phases to prevent the unintentional r environment. In the event of any leaks and spills from the pipeline, clean up will follow existing procedures in place at the Ekati Mine.
9.3.2.2.1 Pathways with No Linkage, Spills (i.e., fuels, petroleum products, reagents) on site may cause a change in surface water quality, affecting fish and other aquatic life	Mitigation identified in the existing Ekati Mine Spill Contingency Plan and environmental design features will be in place to limit the frequency and extent of spills that have potential to activities.
9.3.2.2.1 Pathways with No Linkage, Spills (i.e., fuels, petroleum products, reagents) on site may cause a change in surface water quality, affecting fish and other aquatic life	Hazardous materials and fuel will be stored according to regulatory requirements to protect the environment and workers.
9.3.2.2.1 Pathways with No Linkage, Spills (i.e., fuels, petroleum products, reagents) on site may cause a change in surface water quality, affecting fish and other aquatic life	Emergency spill kits will be provided wherever hazardous materials or fuel are stored and transferred.
9.3.2.2.1 Pathways with No Linkage, Spills (i.e., fuels, petroleum products, reagents) on site may cause a change in surface water quality, affecting fish and other aquatic life	Hydrocarbon-impacted soil with average particle size less than 4 centimetres (cm) will be contained in the existing landfarm. Hydrocarbon-impacted soil that is unsuitable for on-site temporarily stored in the landfarm until it is shipped off site for proper disposal (Section 3.4.1.8.5).
9.3.2.2.1 Pathways with No Linkage, Spills (i.e., fuels, petroleum products, reagents) on site may cause a change in surface water quality, affecting fish and other aquatic life	Hydrocarbon-impacted snow and ice will be contained in the contaminated snow containment facility (Section 3.4.1.8.6).

	Subject/Component
be covered with freshwater	Fish and Fish Habitat/ Reclamation/ Environmental Management
nabitat in the source lakes,	
	Fish and Fish Habitat/ Reclamation/ Environmental Management/ Mitigation
g a reduction in	
es, as described in the Ekati	
	Fish Other Aquatic Life
	Fish and Fish Habitat/ Environmental Management/ Mitigation
it the potential for pipeline clease of minewater to the	Fish and Fish Habitat/ Environmental Management
occur during Project	Design/ Environmental Management/ Mitigation
	Environmental Management
	Environmental Management
ioremediation will be	Environmental Management
	Environmental Management



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9.3.2.2.1 Pathways with No Linkage, Spills (i.e., fuels, petroleum products, reagents) on site may cause a change in surface water quality, affecting fish and other aquatic life	Individuals working on site and handling hazardous materials will be trained in spill response as per the spill contingency plan.	Environmental Management
9.3.2.2.1 Pathways with No Linkage, Spills (i.e., fuels, petroleum products, reagents) on site may cause a change in surface water quality, affecting fish and other aquatic life	The integrity and performance of the pumping and pipeline systems will be monitored throughout the Project construction and operations phases to prevent the unintentional release of minewater to the environment.	Environmental Management / Monitoring
9.3.2.2.1 Pathways with No Linkage, Spills (i.e., fuels, petroleum products, reagents) on site may cause a change in surface water quality, affecting fish and other aquatic life	In the event of any leaks and spills from the pipeline, clean up will follow existing procedures in place at the Ekati Mine.	Environmental Management
9.3.2.2.1 Pathways with No Linkage, The use of explosives near fish-bearing water can cause injury or mortality to fish in Lac du Sauvage	All applicable DFO recommended measures to avoid causing harm to fish from the use of explosives will be considered for the Project (DFO 2014b; also see Section 9.3.2.1.1).	Fish and Fish Habitat/ Environmental Management/ Mitigation
9.3.2.2.1 Pathways with No Linkage, The use of explosives near fish-bearing water can cause injury or mortality to fish in Lac du Sauvage	Blasting will occur in the isolated and dewatered area of Lac du Sauvage (i.e., in the Jay open pit and not in water). Additionally, blasting in the Jay open pit will be beyond the recommended setback distances referenced above.	Fish and Fish Habitat/ Environmental Management/ Mitigation
9.3.2.2.1 Pathways with No Linkage, The construction of the horseshoe dike may isolate contributing sub-basins of Lac du Sauvage, affecting local populations of Arctic Grayling, Lake Trout, and Lake Whitefish in the diverting sub-basins	At closure, the diversion channel will be reclaimed to return flow into the natural flowpath to Lac du Sauvage.	Fish and Fish Habitat/ Reclamation
9.3.2.2.1 Pathways with No Linkage, The construction of the horseshoe dike may isolate contributing sub-basins of Lac du Sauvage, affecting local populations of Arctic Grayling, Lake Trout, and Lake Whitefish in the diverting sub-basins	The Sub-Basin B Diversion Channel will be designed and constructed to allow upstream movement from Lac du Sauvage to upstream tributary lakes in sub-basin B (e.g., Lake B1 [Christine], Lake Ac35) so that fish from Lac du Sauvage will be able to continue to access these watersheds.	Fish and Fish Habitat/ Design
9.3.2.2.1 Pathways with No Linkage, The construction of the horseshoe dike may isolate contributing sub-basins of Lac du Sauvage, affecting local populations of Arctic Grayling, Lake Trout, and Lake Whitefish in the diverting sub-basins	The design specifications for the channel to facilitate upstream fish passage for target species will be discussed with DFO during the detailed design phase of the Project. The channel design will utilize locally sourced boulder and cobble-sized substrates, which will diversify the hydraulic conditions (i.e., velocities, depths) in the stream (Pander et al. 2013).	Fish and Fish Habitat/ Design
9.3.2.2.1 Pathways with No Linkage, Changes to local hydrology (surface water flows, drainage patterns, lake levels, sediment yield) from surface disturbance may cause changes in water and sediment quality, affecting fish and other aquatic life in Lac du Sauvage, and contributing sub- basins (Ac35, B, and C)	Effects from changes to local hydrology will be mitigated, in part, by the management of surface runoff that enters the diked area. As appropriate, natural drainage patterns will be utilized to collect and conduct water; constructed drainage channels, sumps, pumps, and surface pipelines will be used where required to facilitate movement of water, and appropriate mitigation (e.g., silt fences) to manage flow rates and erosion potential, and sediment mobilization.	Fish and Fish Habitat/ Environmental Management/ Mitigation
9.3.2.2.1 Pathways with No Linkage, Changes to local hydrology (surface water flows, drainage patterns, lake levels, sediment yield) from surface disturbance may cause changes in water and sediment quality, affecting fish and other aquatic life in Lac du Sauvage, and contributing sub- basins (Ac35, B, and C)	The Sub-Basin B Diversion Channel will be constructed to divert water from sub-basin B to an area immediately to the south of the diked area of Lac du Sauvage. The channel has been designed to accommodate the natural range of flows from the sub-basins, with appropriately sized culverts at road crossings, and system maintenance.	Fish and Fish Habitat/ Design/ Environmental Management



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9.3.2.2.1 Pathways with No Linkage, Changes to local hydrology (surface water flows, drainage patterns, lake levels, sediment yield) from surface disturbance may cause changes in water and sediment quality, affecting fish and other aquatic life in Lac du Sauvage, and contributing sub- basins (Ac35, B, and C)	Erosion and sediment control management practices (e.g., silt curtains, runoff management, collection ponds) applicable to northern environments, and already in place at the Ekati Mine will be used during construction around disturbed areas, where appropriate.	Fish and Fish Habitat/ Environmental Management/ Mitigation
9.3.2.2.1 Pathways with No Linkage, The area of turbulence around the diffuser outfall in Lac du Sauvage may affect the fish distribution in Lac du Sauvage	The discharge to Lac du Sauvage will occur through a diffuser outfall, which will be placed in a deep area of the lake and located above the lake bed to provide an appropriate distance between the diffuser outflow and bottom sediments.	Fish and Fish Habitat/ Design
9.3.2.2.1 Pathways with No Linkage, The area of turbulence around the diffuser outfall in Lac du Sauvage may affect the fish distribution in Lac du Sauvage	The diffuser location will be selected in an area where fish densities are low (e.g., away from spawning or rearing locations) and fish will be also able to avoid the immediate vicinity of the diffuser. The site selection and final design will consider minimizing effects to fish habitat, both in terms of water quality and habitat avoidance due to the zone of turbulence.	Fish and Fish Habitat/ Design
9.3.2.2.1 Pathways with No Linkage, Dewatering Lac du Sauvage within the diked area may result in stranding and mortality of fish moving downstream from supporting tributaries into the diked area	Design features for the diversion channel will permit upstream and downstream passage of target species (i.e., Arctic Grayling, and to a lesser extent, Lake Trout and Lake Whitefish), based, in part, on their swimming abilities (Section 9.3.2.1.3).	Fish and Fish Habitat/ Design / Mitigation
9.3.2.2.1 Pathways with No Linkage, Discharges from the dewatering of the diked area of Lac du Sauvage may change flows, water levels, and channel/bank stability downstream in the Coppermine River, affecting fish and other aquatic life	Defined limits on pumping conditions will be put in place as mitigation to ensure flows during dewatering remain within the channel banks at the Lac du Gras outlet, and downstream channels will be monitored for evidence of erosion.	Fish and Fish Habitat/ Environmental Management/ Monitoring
9.3.2.2.1 Pathways with No Linkage, Reconnection of the back-flooded area of Lac du Sauvage to the remaining watershed and drainage conditions at closure may change long-term hydrology in local waterbodies, Lac du Sauvage, Lac de Gras, and downstream	Project infrastructure will be reclaimed according to the methods described in the Ekati Mine Interim Closure and Reclamation Plan (ICRP; BHP Billiton 2011), including the removal of stockpiles, buildings, decommissioning of roads, roadway safety berms, and culverts, and reclamation of roads and pads. These activities are expected to return overall basin snowmelt and rainfall runoff coefficients to pre-Project coefficients. The Sub-Basin B Diversion Channel will be decommissioned and re-graded to promote a return to natural flow regimes.	Fish and Fish Habitat/ Reclamation
9.3.2.2.2 Secondary Pathways, Release of sediment during road construction at watercourse crossings and from land disturbance may cause a change in habitat quality, affecting fish and aquatic life in downstream lakes and streams and Lac du Sauvage	Where appropriate, the watercourse crossings will be designed to allow for fish passage.	Fish and Fish Habitat/ Design
9.3.2.2.2 Secondary Pathways, Release of sediment during road construction at watercourse crossings and from land disturbance may cause a change in habitat quality, affecting fish and aquatic life in downstream lakes and streams and Lac du Sauvage	To minimize the potential for sediment entrainment and deposition, where possible, road crossing construction in areas of potential spawning habitat will take place outside the spawning period for Arctic Grayling (approximately early May to mid-June; DFO 2014b). Instream works will be minimized, and when possible, restricted to frozen or non-flowing conditions. All construction activities will be subject to a sediment control plan, and management practices will include standard erosion and sediment control measures (e.g., erosion mats, silt curtains). Erosion and sedimentation protection will also be implemented during the decommissioning phase of the watercourse crossings. Construction and decommissioning practices will follow DFO's advice on erosion and sediment control to avoid causing serious harm to fish (DFO 2014b).	Fish and Fish Habitat/ Environmental Management/ Mitigation
9.3.2.2.2 Secondary Pathways, Release of sediment during road construction at watercourse crossings and from land disturbance may cause a change in habitat quality, affecting fish and aquatic life in downstream lakes and streams and Lac du Sauvage	Where culverts are to be installed at fish-bearing streams, the culverts will be designed and constructed to allow for fish movement as appropriate to meet DFO guidelines (DFO 2014b). The fish passage requirements for each proposed crossing will be determined during detailed design.	Fish and Fish Habitat/ Design/ Environmental Management
9.3.2.2.2 Secondary Pathways, Water supply requirements (mining and potable) for the Project may cause changes to water levels, flows and channel/bank stability in downstream waterbodies and streams, affecting fish and other aquatic life	Winter water withdrawals will be managed with consideration of minimizing effects to under-ice habitat for fish and the DFO Protocol for Winter Water Withdrawal from Ice-covered Waterbodies in the Northwest Territories and Nunavut (DFO 2010).	Fish and Fish Habitat/ Environmental Management/ Mitigation



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9.3.2.2.2 Secondary Pathways, Impingement and entrainment of fish in intake pumps during back- flooding activities may cause injury and mortality to fish in source waterbodies including Lac du Sauvage	To minimize potential harm to fish, fish screens will be placed on all water intake pipes in fish-bearing waterbodies.	Fish and Fish Habitat/ Design/ Environmental Management/ Mitigation
9.3.2.2.2 Secondary Pathways, Impingement and entrainment of fish in intake pumps during back- flooding activities may cause injury and mortality to fish in source waterbodies including Lac du Sauvage	Pumping from waterbodies will also be required during back-flooding of the Jay Pit and dewatered area at closure, as well as back-flooding the Misery Pit and the Panda and Koala pits to create a freshwater cap.	Fish and Fish Habitat/ Environmental Management/ Mitigation
9.3.2.2.2 Secondary Pathways, Impingement and entrainment of fish in intake pumps during back- flooding activities may cause injury and mortality to fish in source waterbodies including Lac du Sauvage	As described in Section 9.3.2.1, measures recommended by DFO to avoid causing harm to fish at screened water intake pipes (DFO 1995, 2014b) will be implemented as necessary for mitigation to minimize entrainment and impingement of fish	Fish and Fish Habitat/ Design/ Environmental Management/ Mitigation
9.3.2.2.2 Secondary Pathways, Impingement and entrainment of fish in intake pumps during back- flooding activities may cause injury and mortality to fish in source waterbodies including Lac du Sauvage	DFO guidelines for fish screens on freshwater intake pipes (DFO 1995) will be followed in design, installation and maintenance of fish screens on intake pipes for the Project.	Fish and Fish Habitat/ Design/ Environmental Management/ Mitigation
9.3.2.2.2 Secondary Pathways, Impingement and entrainment of fish in intake pumps during back- flooding activities may cause injury and mortality to fish in source waterbodies including Lac du Sauvage	Through discussion with DFO, the appropriate screen mesh size for the planned pumping rates will be determined to prevent fish from entering the intake during pumping.	Fish and Fish Habitat/ Design/ Environmental Management/ Mitigation
9.3.2.2.2 Secondary Pathways, Impingement and entrainment of fish in intake pumps during back- flooding activities may cause injury and mortality to fish in source waterbodies including Lac du Sauvage	Screening of intake pumps will reduce fish mortality resulting from impingement or entrainment.	Fish and Fish Habitat/ Environmental Management/ Mitigation
9.3.2.2.2 Secondary Pathways, Altered site drainage and runoff from facilities and water transfers during operations may cause direct changes to water levels, flows, and channel/bank stability in Lac du Sauvage and the Narrows, affecting fish and other aquatic life	Defined limits/pumping conditions for the operational discharge will remain within the capacity of the Narrows and channel banks at the Narrows will be monitored for evidence of erosion.	Fish and Fish Habitat/ Environmental Management
9.3.2.2.2 Secondary Pathways, Indirect effects from dewatering and placement of the waste rock storage area may cause changes in water levels and surface discharges in nearby tributary lakes and streams (i.e., sub-basin C), affecting available habitat for fish and other aquatic life	The WRSA will be constructed to minimize runoff and encourage permafrost formation through placement sequence of materials.	Design
9.3.2.2 Secondary Pathways, Discharges from the dewatering of the diked area of Lac du Sauvage may change flows, water levels, and channel/bank stability in Lac du Sauvage, the Lac de Gras-Lac du Sauvage Narrows, and Lac de Gras, affecting fish and other aquatic life	A Dewatering Plan will be prepared for the Wek'èezhii Land and Water Board (WLWB) as an anticipated condition of the water licence prior to dewatering.	Environmental Management
9.3.2.2.2 Secondary Pathways, Discharges from the dewatering of the diked area of Lac du Sauvage may change flows, water levels, and channel/bank stability in Lac du Sauvage, the Lac de Gras-Lac du Sauvage Narrows, and Lac de Gras, affecting fish and other aquatic life	Limits on pumping conditions will be put in place as mitigation to ensure flows during dewatering will remain within the Lac du Sauvage outlet capacity and channel banks at the Lac du Sauvage outlet channel will be monitored for evidence of erosion.	Monitoring



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9.3.2.2.2 Secondary Pathways, Discharges from the dewatering of the diked areas of Lac du Sauvage may change water quality (suspended sediments) in receiving waterbodies and affect fish and other aquatic life	If TSS concentrations exceed criteria for direct release to the receiving environment, source mitigations may be implemented or the water will be pumped to Lynx or Misery pits.	Water Quality/ Monitoring/ Environmental Management
9.3.2.2.2 Secondary Pathways, Discharges from the dewatering of the diked areas of Lac du Sauvage may change water quality (suspended sediments) in receiving waterbodies and affect fish and other aquatic life	A Dewatering Plan will be prepared for the WLWB as an anticipated condition of the water licence prior to dewatering.	Environmental Management
9.3.2.2.2 Secondary Pathways, Discharges from the dewatering of the diked areas of Lac du Sauvage may change water quality (suspended sediments) in receiving waterbodies and affect fish and other aquatic life	During dewatering, water in the diked area and at the end of pipe will be monitored to confirm compliance with regulatory criteria for TSS.	Monitoring
9.3.2.2.2 Secondary Pathways, Discharges from the dewatering of the diked areas of Lac du Sauvage may change water quality (suspended sediments) in receiving waterbodies and affect fish and other aquatic life	When TSS levels are at the allowable threshold on an ongoing basis as per the response framework outlined in the Dewatering Plan, source mitigation will be implemented, or discharge to Lac du Sauvage will cease (i.e., pumping to Lynx and Misery pits).	Monitoring/Environmental Management
9.3.2.2.2 Secondary Pathways, Release of sediment from dike breaching/removal activities may cause changes in water quality, affecting fish and other aquatic life in Lac du Sauvage	A detailed dike construction plan will be developed and implemented for dike construction, and will include information relevant to mitigation, inspection, monitoring, and corrective action if necessary.	Design/ Monitoring/ Environmental Management
9.3.2.2.2 Secondary Pathways, Release of sediment from dike breaching/removal activities may cause changes in water quality, affecting fish and other aquatic life in Lac du Sauvage	Rockfill will be placed during both the winter and summer months. Erosion and sediment control measures will be implemented (e.g., installation of silt curtains) for turbidity control.	Environmental Management
9.3.2.2.2 Secondary Pathways, Release of sediment from dike breaching/removal activities may cause changes in water quality, affecting fish and other aquatic life in Lac du Sauvage	During summer construction, turbidity curtains will be installed near the portion of the alignment where dike construction will occur, which is an approach demonstrated at other northern mining projects.	Design/ Environmental Management
9.3.2.2.2 Secondary Pathways, Release of sediment from dike breaching/removal activities may cause changes in water quality, affecting fish and other aquatic life in Lac du Sauvage	Turbidity monitoring will be conducted at designated locations throughout open-water and under-ice conditions, within and outside of the zone of the turbidity curtains.	Monitoring
9.3.2.2.2 Secondary Pathways, Release of sediment from dike breaching/removal activities may cause changes in water quality, affecting fish and other aquatic life in Lac du Sauvage	Non-acid generating, chemically inert material (i.e., granite) will be used to construct the dike to prevent leaching of metals into water (Section 3.3.2).	Design / Geochemistry
9.3.2.2.2 Secondary Pathways, Release of sediment from dike breaching/removal activities may cause changes in water quality, affecting fish and other aquatic life in Lac du Sauvage	At closure, breaching and removal of sections of the dike will only occur when water quality within the diked area meets specifications.	Environmental Management/ Reclamation
9.3.2.2.2 Secondary Pathways, Release of sediment from dike breaching/removal activities may cause changes in water quality, affecting fish and other aquatic life in Lac du Sauvage	A closure plan will be developed which will include management of dike breaching and removal activities to limit the potential for effects to water quality and fish and fish habitat.	Fish and Fish Habitat/ Reclamation/ Environmental Management/ Mitigation
9.3.2.2.2 Secondary Pathways, Release of sediment from dike breaching/removal activities may cause changes in water quality, affecting fish and other aquatic life in Lac du Sauvage	The plan will include information relevant to mitigation, inspection, and monitoring of dike breaching and removal activities.	Environmental Management



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9.3.2.2.2 Secondary Pathways, Release of sediment from dike breaching/removal activities may cause changes in water quality, affecting fish and other aquatic life in Lac du Sauvage	Erosion and sediment control practices will be implemented where appropriate, such as the use of silt curtains.	Environmental Management / Mitigation
9.3.2.2.2 Secondary Pathways, The dike isolating the Jay pipe may provide spawning habitat for fish where any potential contaminants within interstitial spaces may affect survival of eggs or fry in Lac du Sauvage	The dike isolating the Jay pipe in Lac du Sauvage will be constructed using granite rockfill which is not potentially acid generating (non-PAG) rock (Section 8.2.2.2.3; Geochemistry Baseline Report, Annex VIII).	Design/ Environmental Management/ Geochemistry
9.3.2.2.2 Secondary Pathways, The dike isolating the Jay pipe may provide spawning habitat for fish where any potential contaminants within interstitial spaces may affect survival of eggs or fry in Lac du Sauvage	Bentonite and other materials used for dike construction will be isolated within the core of the dike. As a result, the water chemistry within the interstitial spaces of the dike is not expected to deviate substantially from ambient lake water, or from interstitial water at natural spawning habitat.	Design / Fish and Fish Habitat
9.3.2.2.2 Secondary Pathways, Modification to Panda and Koala Pit closure may cause changes to flows, water levels, and channel/bank stability in downstream and source waterbodies which may affect fish and fish habitat	Scheduled withdrawals from Upper Exeter Lake will be also managed so that withdrawal rates and annual volumes withdrawn from source lakes do not cause negative impacts in the source lakes, as described in the Ekati ICRP.	Environmental Management
9.3.2.2.2 Secondary Pathways, Pumping water to refill the Jay Pit and dewatered diked area of Lac du Sauvage may affect flows, water levels, and channel integrity in the Coppermine River, affecting fish and other aquatic life	During anticipated low flow time periods, such as winter months, pumping rates out of Lac du Sauvage into the pits will be reduced and pumping rates will be managed to minimize downstream effects.	Environmental Management
9.3.2.2.2 Secondary Pathways, Pumping water to refill the Jay Pit and dewatered diked area of Lac du Sauvage may affect flows, water levels, and channel integrity in the Coppermine River, affecting fish and other aquatic life	The duration of decreased flow due to back-flooding the Jay Pit and the dewatered area is expected to be less than 4 years and will not affect the seasonal timing of flows.	Environmental Management
9.4.3.1.1 Dike-Dewatered Area Footprint	The dike will be breached when water quality in the back-flooded area meets pre-determined acceptability criteria.	Reclamation
9.4.3.1.1 Dike-Dewatered Area Footprint	An offsetting plan will be developed in discussion with Fisheries and Oceans Canada (DFO) and local Aboriginal communities, and ultimately, authorized by DFO to undertake offsetting measures to counterbalance the unavoidable residual serious harm to fish from the Project, with the goal of maintaining or improving the productivity of the commercial, recreational, or Aboriginal fisheries. The conceptual Offsetting Plan is in Appendix 9A. A final offsetting plan will be produced during the permitting phase of the Project and will be submitted as part of the Application for Authorization under the <i>Fisheries Act</i> .	Fish and Fish Habitat/ Reclamation/ Engagement
9.4.3.1.2 Direct Mortality From Fish-Out	Prior to the dewatering, a fish-out will be conducted to remove fish from the dewatered area of Lac du Sauvage.	Fish-out
9.4.3.1.2 Direct Mortality From Fish-Out	Because the dewatered area of Lac du Sauvage contains large-bodied and small-bodied fish species with a variety of habitat preferences, a combination of gear types will be used to maximize capture efficiency.	Fish-out
9.4.3.1.2 Direct Mortality From Fish-Out	The final fish-out plan will be designed and implemented in discussion with DFO and local Aboriginal communities, and will follow the General Fish-out Protocol for Lakes and Impoundments in the Northwest Territories and Nunavut (Tyson et al. 2011), as appropriate.	Fish-out
9.4.3.1.2 Direct Mortality From Fish-Out	Project-specific protocols will be developed prior to initiating the fish-out.	Fish-out
9.4.3.1.2 Direct Mortality From Fish-Out	It is expected that fish from the fish-out will be distributed to local communities for consumption.	Fish-out
9.4.3.1.2 Direct Mortality From Fish-Out	To mitigate for potential changes in habitat connectivity between Lac du Sauvage and upstream habitats within the diverted watercourses (i.e., upper reaches of Stream Ac35, B0 and B1), the diversion channel will be designed to facilitate fish passage to upstream locations. Design features for the diversion channel will permit upstream passage of target species (i.e., adult Arctic Grayling, and to a lesser extent, Lake Trout), based on their swimming abilities (Section 9.3.2.1.3).	Fish and Fish Habitat/ Design/ Mitigation
9.4.3.1.2 Direct Mortality From Fish-Out	The design specifications for the channel to facilitate upstream fish passage for target species will be discussed with DFO and communities during the detailed design phase of the Project.	Fish and Fish Habitat/ Design/ Mitigation/ Engagement
9.4.3.2.4 Effects During Post-Closure	Breaching the dike will occur only when water quality in the dewatered area is suitable for mixing with the lake.	Water Quality/ Monitoring/ Environmental Management
9.4.3.2.4 Effects During Post-Closure	At closure, the dewatered area of Lac du Sauvage will be back-flooded and habitat will be returned to Lac du Sauvage in an altered state. The dike will be breached when water quality in the dewatered area meets acceptability criteria. The physical and chemical environment of the area will allow re-establishment of a healthy functioning aquatic ecosystem.	Fish and Fish Habitat/ Reclamation
9.4.3.3.1 Change in Lake Water Level	During anticipated low flow time periods, such as winter months, pumping rates out of Lac du Sauvage into the pits may be reduced and pumping rates will be managed to minimize downstream effects.	Fish and Fish Habitat/ Environmental Management



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9.4.4 Residual Effects Summary	At closure, the dewatered area of Lac du Sauvage will be back-flooded and the dike will be breached when water quality in the diked area is suitable for mixing with the lake (i.e., when most habitat functions are recovered).	Fish and Fish Habitat/ Water Quality / Monitoring
9.4.4 Residual Effects Summary	Dominion Diamond will work with DFO and local Aboriginal communities on developing an offsetting plan to counterbalance for losses in fish habitat productivity expected during operations and at closure. The final offsetting plan will be developed during the permitting phase of the Project as a requirement of the <i>Fisheries Act</i> Authorization.	Fish and Fish Habitat/ Engagement
9.4.4 Residual Effects Summary	Prior to dewatering, a detailed fish-out plan will be developed in discussion with local Aboriginal groups and DFO.	Fish-out/ Engagement
9.5 Prediction Confidence and Uncertainty	The footprint area will be refined as the Project advances the detailed design and will be updated with the final offsetting plan.	Fish and Fish Habitat/ Offsetting
9.5 Prediction Confidence and Uncertainty	The final numbers will be included in the offsetting plan, which will be developed in the permitting phase of the Project.	Fish and Fish Habitat/ Offsetting
9.5 Prediction Confidence and Uncertainty	The AEMP will be designed to address predicted effects to the aquatic environment related to changes in surface water quantity and quality, sediment quality, aquatic life other than fish, fish habitat, and fish health (including fish tissue chemistry).	Monitoring
9.5 Prediction Confidence and Uncertainty	Monitoring and adaptive management will also be used to determine the effectiveness of a particular mitigation measure and where modifications may be required.	Monitoring/ Adaptive Management
9.6.2 Results	An offsetting plan will be developed during the permitting phase of the Project to undertake offsetting measures to counterbalance the unavoidable residual serious harm to fish from the Project, with the goal of maintaining or improving the productivity of the commercial, recreational, or Aboriginal fisheries.	Fish and Fish Habitat/ Offsetting
9.6.2 Results	To mitigate for potential changes in habitat connectivity between Lac du Sauvage and upstream watercourses (e.g., upper reaches of Stream Ac35, B0 and B1), the Sub-Basin B Diversion Channel will be designed to facilitate fish passage to upstream locations. The design specifications for the channel to facilitate upstream fish passage for target species will be discussed with DFO during the detailed design phase of the Project.	Fish and Fish Habitat/ Environmental Design
9.6.2 Results	Dominion Diamond will work with DFO and local Aboriginal communities on developing a fish-out plan so that no captured fish is inadvertently wasted.	Fish-out/ Engagement
9.6.2 Results	The Project also considered a suite of environmental design features and mitigations that will reduce effects to fish and other aquatic life from changes to water quality.	Fish and Fish Habitat/ Design
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	Monitoring program design will incorporate traditional knowledge gathered through engagement with communities, where appropriate. The program design will also consider previously collected data.	Fish and Fish Habitat/ Monitoring / Engagement
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	An AEMP will be required of the Project through the Project's Water Licence and will involve aquatic components focused on the receiving environment. Given the Project is an extension of the existing Ekati Mine, it is anticipated that the AEMP for the Project will be an expansion of the existing AEMP under the current Water Licence #W2012L2-0001 (WLWB 2014). A conceptual overview of the scope of the expanded AEMP is outlined in Appendix 9C (Conceptual AEMP); however, the detailed AEMP design will be developed during the permitting phase of the Project. The AEMP for the Project will build upon the existing AEMP for the Ekati Mine (e.g., ERM Rescan 2014).	Fish and Fish Habitat/ Monitoring
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	Monitoring for fish and lower trophic levels, both at the Project site and in the receiving environment, will be implemented. The AEMP will be the basis of environmental effects monitoring and will be implemented during all Project phases, including post-closure. Monitoring will include data collection at locations within the Project footprint, and at locations within the Lac du Sauvage and Lac de Gras watersheds	Fish and Fish Habitat/ Monitoring
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	It is anticipated that components of the AEMP specific to this KLOI will include: plankton, benthic invertebrates, and fish (i.e., sampling for fish tissue and fish health); and various biological monitoring in reference lakes. Monitoring will be multi-phased, occurring during construction, operations, closure, and post-closure and occur on a seasonal basis as appropriate for the component. Monitoring will be complex in terms of sampling locations and sampling frequencies, with efficient alignment between programs (including hydrology and water quality), such that linkages can be made between activities at the mine and changes or responses in the aquatic environment.	Fish and Fish Habitat/ Monitoring
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	It is expected that monitoring of the Sub-Basin B Diversion Channel will also be conducted during operations to confirm design specifications are met for flows and fish passage, and similarly that the reconnected channel in post-closure is functioning as anticipated.	Fish and Fish Habitat/ Monitoring
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	It is anticipated that the objectives of the AEMP will also include links to management responses, as follows: evaluate the short-term and long-term predicted effects of the Project on the physical, chemical, and biological components of the aquatic ecosystem of Lac du Sauvage and Lac de Gras; estimate the spatial extent of predicted effects; compare monitoring results to effects predictions, and where applicable and necessary, update effects predictions; provide the necessary input for monitoring responses to potential unacceptable effects on the aquatic ecosystem; and, evaluate the effectiveness of monitoring responses. 	Fish and Fish Habitat/ Monitoring/ Adaptive Management
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	Monitoring and sampling techniques and analysis procedures will be consistent with methods used during the baseline survey period to the maximum extent possible. The field and laboratory processes will include the implementation of quality assurance/quality control measures for data acquisition, water and biota sampling, and analysis and reporting.	Fish and Fish Habitat/ Monitoring
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	Monitoring will also be conducted to evaluate the effectiveness of offsetting measures, and will include evaluation of both physical and biological characteristics, as appropriate.	Fish and Fish Habitat/ Offsetting Monitoring
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	The Conceptual Offsetting Plan is included as Appendix 9A; the detailed monitoring plan will be included in the final offsetting plan which will be developed in discussion with DFO and with input from local Aboriginal communities during the permitting phase of the Project.	Fish and Fish Habitat/ Offsetting Monitoring
9.7.2 Monitoring for Fish and Aquatic Life other than Fish	During some construction activities (e.g., dike construction in Lac du Sauvage), turbidity monitoring will be conducted to prevent adverse effects on fish and fish habitat from the entrainment and deposition of sediments.	Fish and Fish Habitat/ Monitoring



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9A	Appendix – Conceptual Offsetting Plan	
9A1.1 Purpose	Dominion Diamond will continue to advance the initial options presented herein to determine if they are feasible as offsetting measures and acceptable to DFO. Dominion Diamond will also continue to engage with local communities and DFO on additional potential options.	Offsetting / Environmental Management/ Engagement
9A3.2 Affected Watersheds	Back-flooding of the dewatered area will be carried out in a manner that provides a controlled flow of water to protect source water and downstream areas against adverse impacts.	Surface Hydrology/ Environmental Management
9A3.4.1 Diversion Channels	To mitigate for lost habitat connectivity between Lac du Sauvage and upstream waterbodies and watercourses, the diversion channel will be designed to facilitate fish passage of target species (i.e., adult Arctic Grayling, and to a lesser extent, Lake Trout) to upstream locations based on their swimming abilities (Jones et al. 1974; Katopodis 1994; Peake 2008; Katopodis and Gervais 2012).	Fish and Fish Habitat/ Environmental Design
9A3.4.1 Diversion Channels	The final design of the diversion channel will consider reasonable measures to facilitate fish movement based on expected flow conditions, in particular, maintaining hydraulic conditions that support movement of target fish species. Suitable velocity breaks, such as boulder clusters, may be used to provide flow refugia for fish (Fischenich and Seal 1999; Gaboury 2003; DFO 2006; ODFW 2010). Channel designs will also consider refugia for smaller-bodied fish that may use the lower section of the channel near Lac du Sauvage. The channel design will utilize locally sourced boulder and cobble-sized substrates, which will diversify the hydraulic conditions (i.e., velocities, depths) in the stream (Pander et al. 2013).	Fish and Fish Habitat/ Environmental Design
9A3.4.2 Dike Construction	To mitigate the extent of water quality effects during the construction of the Jay Dike in Lac du Sauvage, turbidity curtains will be used to control elevated total suspended solids (TSS) and turbidity from extending beyond a defined zone of influence. The turbidity curtain panels will overlap so there are no gaps between panels and curtains to allow the release of sediments from the enclosed area. Areas within and outside of the curtained area will be regularly monitored for water quality parameters, including turbidity and TSS	Water Quality/ Environmental Design
9A3.4.3 Erosion Control	Appropriate sediment and erosion controls during Project activities during construction, operations, and closure (e.g., timing of construction, use of silt curtains within waterbodies or along drainage paths, road watering, site contouring) will be undertaken with practices consistent with those used at the Ekati Mine and based on methods that have been found to be most effective in northern mining operations for erosion and sediment control.	Environmental Management
9A3.4.3.1 General Construction	Silt fences will be used to reduce the transport of sediment from construction and general land-based land disturbance activities.	Environmental Management / Mitigation
9A3.4.3.2 Diffuser	Piped discharge from Misery Pit to Lac du Sauvage in operations will be pumped to Lac du Sauvage via a diffuser to disperse discharge energy and rapidly attenuate the discharge.	Environmental Management/ Mitigation
9A3.4.4 Road Crossings	The footprint disturbance area will be limited to the extent practical for Project infrastructure.	Design
9A3.4.4 Road Crossings	 Where construction is required, the following mitigation measures will be used to avoid or mitigate serious harm to fish: roads will be built as narrow as practical while maintaining safe construction and operation practices; 	Fish and Fish Habitat/ Design/ Mitigation
	roads will follow alignments that minimize stream crossings and if feasible, stream crossings will be perpendicular to watercourses;	
	• roads will avoid sensitive habitat where feasible; and,	
	construction of road crossings at watercourses will take place outside of the timing windows for spring spawning Arctic Grayling in the Northwest Territories (i.e., early May to mid-June) for streams where potential for spring spawning exists (DFO 2014).	
9A3.4.4 Road Crossings	To prevent potential barriers to upstream fish passage at any of the proposed road crossings of natural, fish-bearing channels and the diversion channel, culverts will be designed and installed in such a manner to maintain adequate flows and velocities for fish passage, using appropriate federal and territorial guidelines (e.g., DFO 2007; Government of Alberta 2009). For culverts associated with the diversion channel, small rock weirs will be placed immediately downstream of the culvert outlets to backwater the culverts, further facilitating fish passage at low flow.	Environmental Design/ Fish and Fish Habitat
9A3.4.4 Road Crossings	The following maintenance activities will be considered for the life of the mine to further support the success of the diversion channel in providing fish passage:	Monitoring/ Environmental
	regular inspection and maintenance of outlet channels and culverts to remove excess sediment and soil/rock fall material;	Management
	• inspection of culvert inlets and outlets for ice and snow build-up before freshet, and removal of excess ice and/or snow that would prevent freshet flow through the culvert; and,	
	repair of damaged channel linings immediately to limit the potential for erosion and breach of channels.	
9A3.4.5.1 Water Quantity	A dewatering plan will be prepared that will include specified flow rates to the lake environment to attenuate changes in flow. Discharge locations will be determined during the detailed design stage and may be modified based on monitoring results. The outflow capacity of Lac du Sauvage will be maintained during dewatering, and the channel banks of the Lac du Sauvage and Lac de Gras outlet channels will be monitored for evidence of erosion.	Surface Hydrology/ Environmental Management
9A3.4.5.1 Water Quantity	Back-flooding of the pits and dewatered area will be conducted to provide a controlled flow of water to protect source water and downstream areas, including local fish habitat. During low flow time periods, such as winter months, pumping rates out of Lac du Sauvage into the pits would be reduced if necessary to protect fish habitat. Pumping rates will be managed to minimize effects to Lac du Sauvage and be based on an assessment of required flows through the outlet.	Surface Hydrology/ Fish and Fish Habitat/ Environmental Management
9A3.4.6 Water Intakes	Fish screens will be placed on all water intake pipes in fish-bearing waterbodies to minimize potential harm to fish. All measures recommended by DFO to avoid causing harm to fish at screened water intake pipes (DFO 1995; DFO 2014) will be implemented as mitigation to minimize entrainment and impingement of fish.	Design/ Fish and Fish Habitat
9A3.4.7 Blasting Plans	Mitigation measures will be implemented to minimize the effects of blasting in the Jay Pit on fish valued components. All blasting will occur in the Jay open pit within the dewatered area of Lac du Sauvage, not in water, and will be managed to avoid adverse impacts to fish. All applicable DFO recommended measures to avoid causing harm to fish from the use of explosives (DFO 2014; Wright and Hopkey 1998) will be considered.	Fish and Fish Habitat/ Environmental Management / Mitigation
9A5.3.2.4 Community Involvement	Traditional Knowledge would be integrated into the offsetting plan where applicable.	Offsetting / Engagement



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9B	Appendix – Conceptual Fish Out Plan	
9B2.2 Roles and Responsibilities	The project manager will be Dominion Diamond's representative for the fish-out and will be responsible for approving and coordinating the detailed fish-out plan, schedule and budget, staffing, communicating with DFO, and providing deliverables.	Fish-out/ Environmental Management
9B2.2 Roles and Responsibilities	A project biologist will be involved in developing the work plan and will be responsible for training field staff, supervising field activities and data collection, quality assurance and quality control, conducting data analysis, and preparing deliverables.	Fish-out/ Environmental Management
9B2.2 Roles and Responsibilities	Field crew leads will work under the supervision of the project biologist and will be in charge of fishing, data collection, and health and safety for each field crew. Field crew technicians will conduct the fish-out and data collection under the supervision of the crew leads and project biologist. If possible, field leaders and technicians will be members of local communities with experience in gill netting, fish handling, and processing.	Fish-out/ Environmental Management
9B3.1 Study Design	The fish-out will follow the framework and general protocols described in the General Fish-out Protocol (Tyson et al. 2011). An overview of the conceptual study design is provided below. Detailed methods, sampling protocols, and schedules will be determined in consultation with local communities and DFO, and provided in a detailed fish-out plan before the program is initiated.	Fish-out/ Environmental Management
9B3.1 Study Design	Additional discussions will be undertaken with DFO and communities about potential effects of transferring fish to the productivity and the stability of the fishery in Lac du Sauvage and Lac de Gras.	Fish-out/ Environmental Management
9B3.1 Study Design	The final removal phase will begin when most large-bodied fish have been removed based on a site-specific protocol that will be developed as part of the detailed fish-out plan, and as agreed upon with DFO. The objective of the final removal phase will be to remove as many of the remaining fish from the study area as practical using a wide range of sampling methods.	Fish-out/ Environmental Management
9B3.4 Fish Transfers	The final decision of whether to sacrifice all fish or transfer some small-bodied fish to Lac du Sauvage will be made in discussion with DFO and Aboriginal communities.	Fish-out/ Engagement
9B3.6.3 Fish Camps	The feasibility of fish camps will be examined by Dominion Diamond during the development of the detailed fish-out plan based on logistical details at the Ekati Mine and through continued engagement on how fish camps can best be incorporated while still satisfying the phased fishing effort requirements of the DFO fish-out protocols.	Fish-out/ Environmental Management
9B3.7.1 Processing	Methods for processing the fish will be determined in discussion with the local communities that will use the fish.	Fish-out/ Environmental Management
9B3.7.3 Distribution	Fish will be distributed to communities as soon as practical after processing.	Fish-out/ Engagement
9C	Appendix – Conceptual Aquatic Effects Monitoring Program	
	 hydrology; water quality; sediment quality benthic invertebrate community; phytoplankton community; zooplankton community; and, fish (includes fish health and fish tissue chemistry). 	
9C2.1 Scope	The AEMP will integrate Traditional Knowledge where appropriate. In addition, Special Studies, which are not core components of the AEMP, but rather studies proposed with the intent to supplement the AEMP components, may be conducted to address potential data gaps, and support future monitoring.	Monitoring
9C2.2 Conceptual Site Model	The AEMP will describe a method of differentiating the Ekati Mine versus Diavik Mine contributions to water quality and quantity changes or changes in aquatic life in Lac de Gras.	Monitoring
9C2.3 Response Framework	The Response Framework will be amended to include the Project as part of the regulatory process following successful completion of Environmental Assessment.	Monitoring/ Adaptive Management
9C2.4 Reporting	Monitoring will be summarized yearly as part of the Annual AEMP Report that is submitted to the WLWB by March 31 of each calendar year. Each annual report will follow the requirements identified in the Water Licence	Monitoring
Section 10	Terrain	
10.2 Existing Geotechnical Stability of the Proposed Waste Rock Storage Area.	The existing Ekati Mine Waste Rock and Ore Storage Management Plan (WROMP) will be expanded to incorporate the Jay WRSA. The Jay WRSA will be located west of the Jay Pit on the shore of Lac du Sauvage (Section 3.5.5).	Terrain/Engineering
10.2.1 Physical and Chemical Characteristics of Mine Rock and Kimberlite	All of the metasediment mined from the Jay Pit will be managed as potentially acid-generating material. Metasediment from the Jay Pit will be placed along with the non-potentially acid generating granite waste rock in the Jay WRSA. An encapsulating layer of non potentially acid generating granite rock of at least 5 m thickness will be placed over the Jay WRSA with the objective that the metasediment be frozen into permafrost. Preferentially freezing the reactive materials into permafrost will provide an additional long-term environmental risk reduction, and it is the approach already in use at the Ekati Mine. The proportions of granite versus metasediment to be mined from the Jay Pit will provide ample granite for this cover layer.	Terrain/Geochemistry
10.2.3 Permafrost, and Ground Thermal and Ground Ice Conditions.	A small proportion of the Jay WRSA appears to be located within over an area of active but low-hazard periglacial processes. This area will require site reconnaissance to confirm the soil conditions	Terrain/ Soils
10.2.4 Topography and Slope Stability	The Jay WRSA is expected to be constructed similarly to other WRSAs at the Ekati Mine and will incorporate designs that enhance the natural process for freezing into permafrost (Golder 2014b). The Jay WRSA will be built up from the bottom in 15 m benches with angle of repose slopes (1.3H:1V) and 25 m setbacks for each bench (Golder 2014b). This geometry will result in an overall 3H:1V slope for the pile (Golder 2014b).	Terrain/Design



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10.3.1.2.2 Results	In April 2014, a second thermistor JGT-07 was installed on the same island as thermistor JGT-01 to monitor the thermal conditions of the upper soil layer. At the time of preparation of the DAR, measurements for thermistors had started to stabilize with a temperature approximately -3°C at a depth of about 16 mbgs (elevation 404 masl) (Annex IV). Additional readings will be collected to determine the maximum depth of the active layer and to confirm thermal ground conditions on this island.	Terrain/Engineering
10.4.1 Erosion Control Measures	Mitigation and erosion control measures that will be implemented to limit the extent of erosion include the following:	Terrain/ Mitigation / Design
	• Existing Ekati Mine erosion and sediment control measures (e.g., silt curtains, runoff management) will be used during construction, where appropriate, to limit the amount of suspended sediment transport.	
	 The Jay WRSA will be constructed as designed to provide a thermally protective surface cover over potentially acid-generating materials and to provide a relatively flat upper surface that discourages snow accumulation. 	
10.4.1 Erosion Control Measures	The riparian (shoreline) and littoral (shallow) areas within the diked area will be reclaimed where necessary to enable natural regrowth of riparian and aquatic vegetation. The reclamation work is envisioned to include localized repair of erosion and re-vegetation of select areas with aquatic and riparian plants. This work will be based on experience gained through operations, reclamation research, and closure of other areas of the Ekati Mine.	Terrain/ Vegetation/ Reclamation
10.4.1 Erosion Control Measures	Monitoring closure and reclamation objectives and necessary maintenance of the reclaimed facilities will continue for a period of time after completion of the reclamation work (BHP Billiton 2011). The schedule and program for monitoring and maintenance will be designed to complement the post-reclamation monitoring schedule already developed for the existing Ekati Mine Interim Closure and Reclamation Plan. Monitoring of the physical stability of dike breaches is anticipated for a period after closure.	Terrain/ Monitoring/ Reclamation/ Engineering
10.4.2 Prevention of Permafrost Degradation or Growth Encouragement	The Jay WRSA will be constructed using methods similar to methods used at other WRSAs on the Ekati Mine site. A base layer of granite rock will be placed over the foundation to keep the active layer within the waste rock, and to maintain frozen (permafrost) conditions within the foundation soils.	Terrain/ Reclamation/ Design
10.4.3 Monitoring of Geotechnical Stability Waste Rock Storage Areas, Dams, and Dikes	Monitoring activities will be an extension of existing programs in place at the Ekati Mine as required under the Water Licence. The Jay WRSA will be constructed as designed, which provides for long-term physical stability. Ground temperature cables will be installed in Jay WRSA and will be used to monitor permafrost. Seepage water quality will be monitored twice per year (spring and fall) as part of the annual seepage surveys.	Terrain/ Monitoring/ Construction/ Water Quality
10.4.3 Monitoring of Geotechnical Stability Waste Rock Storage Areas, Dams, and Dikes	Geotechnical instrumentation will be installed within the Jay dike structure and foundation to monitor the performance of the dike during dewatering and operation. The instrumentation will monitor the physical performance of the dike to confirm that the structure is operating according to the design intent. Monitoring with the instrumentation will be continued into back-flooding and closure until the dike is breached at closure.	Terrain/ Engineering/ Monitoring
10.4.4 Adaptive Management	Monitoring programs currently in place at the Ekati Mine are designed to detect unexpected environmental changes. If unexpected changes occur, the likely causes will be determined and appropriate response plans will be developed and implemented according to the conditions at hand. Following the implementation of appropriate adaptive management responses, Dominion Diamond will continue with sampling, monitoring, and evaluation of the situation and the suitability of the response.	Terrain/ Monitoring/ Adaptive Management
10.5 Summary	Waste rock from the Jay Pit will be mainly non-acid-generating granite (estimated 70%); the remainder will be metasediments and overburden. All of the metasediment mined from the Jay pit will be managed as potentially acid-generating material. The existing Ekati Mine WROMP will be expanded to incorporate the Jay WRSA.	Terrain/ Geochemistry/ Environmental Management
10.5 Summary	The WRSAs at the Ekati Mine are constructed to minimize runoff and encourage permafrost formation. A small proportion of the WRSA is located within areas of active, but low-hazard, periglacial processes (freezing and thawing). This area will require site reconnaissance to confirm the soil conditions.	Terrain/ Soil/ Construction
10.5 Summary	Monitoring of reclaimed facilities will continue for a period of time after completion of the reclamation work. The schedule and program for monitoring and maintenance will be designed to complement the post- reclamation monitoring schedule already developed for the existing Ekati Mine Interim Closure and Reclamation Plan. The monitoring program for the Ekati Mine proposes to use a combination of the current programs adapted to suit specific closure needs.	Terrain/ Monitoring/ Reclamation
Section 11	Vegetation	
Table 11.3-1 Potential Pathways for Effects to	Design of the Jay Project minimizes the construction of new buildings, roads, pads, or excavations that might alter permafrost by using existing infrastructure.	Vegetation/ Mitigation / Environmental
Plant Populations and Communities	Soil disturbance will be limited to only those areas required for construction and operation of the Project.	Management/ Design
	Footprints of the WRSAs and other structures will be optimized to limit surface disturbance to the extent practical.	
	Access roads will be as narrow as feasible, while maintaining safe construction and operation practices.	
	Buildings will be insulated to minimize heat loss, and will be dismantled as part of reclamation activities.	
	Manage drainage around infrastructure to reduce pooling of water at the surface.	
	Insulate thaw-sensitive slopes where necessary.	
	Use coarser materials for basal road construction to minimize frost effects.	1



Section of the DAR	Commitment Description	Subject/Component
Table 11.3-1 Potential Pathways for Effects to	The Project maximizes the use of the existing infrastructure to reduce the environmental footprint to the extent practical.	Vegetation/ Mitigation / Environmental
Plant Populations and Communities	The new access roads will be as narrow as feasible, while maintaining safe construction and operation practices.	Management/ Design
	Footprints of the WRSAs and other structures will be optimized to limit surface disturbance to the extent practical.	
	A pipe bench will be constructed to accommodate the pipelines, which will follow existing and proposed road alignments to the extent practical to minimize the Project footprint.	
	Soil disturbance will be limited to only those areas required for construction and operation of the Project.	
	Siting and construction of the Project will be planned to avoid environmentally sensitive areas (e.g., listed plants and wetlands) to the extent practical.	
	• The existing Misery and Lynx Pits will be used for dewatering and minewater management, limiting the requirement for additional areas to be disturbed for minewater management.	
	Environmental monitoring programs already in place at the Ekati Mine will be extended to incorporate construction and operation of the Jay Project.	
	• Upper soil material, lake bed sediments, and glacial till overburden may be salvaged, to the extent practical, for possible future use in reclamation Management practices already in place at the Ekati Mine will be implemented to control erosion and sediment.	
	The existing Ekati Mine ICRP will be amended to include the Project.	
	Progressive reclamation of the Project will be completed to the extent practical.	
	Conditions will continue to be monitored over time to evaluate the success of the ICRP and, using adaptive management and newer proven methods as available, adjust the ICRP, if necessary.	
Table 11.3-1 Potential Pathways for Effects to Plant Populations and Communities	• Established Ekati Mine blasting practices will be used in the dewatered portion of Lac du Sauvage and for blasting of quarry rock, including on-going enhancements that may be developed prior to the start of the Project.	Mitigation/ Construction
Table 11.3-1 Potential Pathways for Effects to	Regular maintenance of equipment will continue at the Ekati Mine.	Air Quality/ Vegetation/ Mitigation
Plant Populations and Communities	Dust suppression will be applied as appropriate to roads, airstrip, and laydown areas.	
	Speed limits will continue to be applied to limit fugitive dust.	
	Salvaged soil materials stockpiles or exposed soils will be seeded, where necessary, to reduce wind erosion.	
Table 11.3-1 Potential Pathways for Effects to Plant Populations and Communities	• The surficial materials will be salvaged, where practical, for possible future use in reclamation, per established practice at the Ekati Mine.Local seed collection will continue per established practice for reclamation through direct seeding of nursery propagation.	Vegetation/ Reclamation/ Mitigation
	Certified seed will be used for reclamation activities, per the existing Ekati Mine ICRP.	
	Reclamation objectives reflect the local native vegetation communities.	
	• New equipment brought to the Ekati Mine for the Jay Project, will be cleaned to reduce the potential for introduction or spread of non-native species, according to established practices at Ekati Mine.	
	If non-native invasive species are identified, a response plan will be established as per current practice at the Ekati Mine.	
Table 11.3-1 Potential Pathways for Effects to Plant Populations and Communities	Metasediment rock mined from the Jay open pit will be encapsulated within a thermally protective cover layer of granite such that metasediment is frozen into permafrost; this continues the approach successfully established at the Ekati Mine.	Geochemistry/ Mitigation/ Vegetation
	The existing Ekati Mine WROMP, including seepage monitoring, will be expanded to include the Jay WRSA.	
	Thermistors will be installed within the waste rock piles to monitor the progression of permafrost development.	
	Mine rock used to construct the dikes will be non-acid generating.	
	• The WRSA will include a basal layer of non-acid generating granite that enhances permafrost aggradation and physically separates potentially reactive materials to prevent drainage with low pH.	
Table 11.3-1 Potential Pathways for Effects to	Where practical, natural drainage patterns will be unaltered to reduce the use of ditches or diversion berms.	Mitigation/ Construction/ Monitoring/
Plant Populations and Communities	The diversion channel that will be constructed at the Christine Lake outflow (Sub-Basin B Diversion Channel) will be reclaimed at closure so that water flows through the natural drainage pattern to Lac du Sauvage.	Reclamation
	Culverts will be installed along site access roads, as necessary, to maintain drainage.	
	The road route alignment will minimize stream crossings and limit disturbance to sensitive habitat as feasible.	
	The Sub-Basin B Diversion Channel will be designed to manage flows and minimize potential for erosion and bank instability.	
	Dewatering and operational discharges will be monitored for downstream erosion and actions will be taken to prevent erosion in downstream lakes and channels.	
Table 11.3-1 Potential Pathways for Effects to Plant Populations and Communities	The Sub-Basin B Diversion Channel will be designed to manage flows and minimize potential for suspended sediment generation from bed and bank erosion	Mitigation/ Construction/ Monitoring/
	Construction and monitoring of settling/sediment ponds and/or water treatment areas will be part of dewatering and minewater management	Water Quality/ Soils
	Water guality monitoring for total suspended solids will be completed during the dewatering period.	
	• Standard erosion and sediment control measures (e.g., silt curtains, runoff management) will be used during construction, where appropriate	



Section of the DAR	Commitment Description	Subject/Component
Table 11.3-1 Potential Pathways for Effects to Plant Populations and Communities	 The existing Ekati Mine ICRP will be expanded to include the Jay Project. Dike breaching and re-flooding of the dewatered area will be done in a controlled manner so water levels will be equalized on both sides of the dike and back-flooding will be managed to avoid adverse effects in source waterbodies and downstream 	Mitigation/ Monitoring/ Soils/ Reclamation/ Vegetation
	 Water quality monitoring for total suspended solids will be completed during the back-flooding period. During excavation of dike breaches, silt curtains and other sediment and turbidity mitigation will be used as appropriate. Reclamation of shoreline and shallow areas within the diked area will include localized repair of erosion and revegetation with aquatic and riparian plants, as necessary. 	
Table 11.3-1 Potential Pathways for Effects to Plant Populations and Communities	 Following established Ekati Mine WRSA practices, potentially acid generating metasediment rock will be encapsulated within a thermally protective cover layer of granite to facilitate permafrost development. The existing Ekati Mine WROMP, including seepage monitoring, will be expanded to include the Jay WRSA. Thermistors will be installed within the WRSA to monitor permafrost. 	Mitigation/ Geochemistry
Table 11.3-1 Potential Pathways for Effects to Plant Populations and Communities	 The existing Spill Contingency Plan in place for the Ekati Mine Mine will be expanded to include the Jay Project. Regular equipment maintenance (e.g., regular checks for leaks) will continue. Drip trays and/or absorbent pads are used during servicing and refuelling. All hazardous substances are stored and handled on site in accordance with applicable regulations. Fuel is stored at a central bulk fuel farm at the Ekati Mine main camp and at satellite fuel farms located at Misery, Fox, and Koala North. Fuel tanks are housed within bermed areas. The Project will follow Ekati Mine's standard policies in the event of a spill; spill response training is provided and updated. Soil and snow affected by hydrocarbon spills will continue to be handled in accordance with the existing Hydrocarbon-impacted Materials Management Plan and will be remediated in the landfarm or shipped off-site. Minewater and fine processed kimberlite slurry pipelines will be monitored and inspected throughout construction (i.e., dewatering of diked area), operations, and closure. Any leaks or spills identified along the pipelines will be addressed immediately and clean-up, if required, will be implemented following the existing Spill Contingency Plan. 	Mitigation/ Environmental Management
11.3.2.2.1 Pathway with No Linkage	Blasting activities will be managed using current practices applied at Ekati Mine. These practices have evolved in site-specific efficiency throughout the 15 plus years of operations at the Ekati Mine to provide good blast performance. Current blasting practices reduce the potential for enhanced nitrogen loading of soils. Seepage and surface water runoff from the Waste Rock Storage Area (WRSA) will be monitored for nitrogen residual substances according to the existing Ekati Mine Waste Rock and Ore Storage Management Plan (WROMP).	Environmental Management
11.3.2.2.1 Pathway with No Linkage	Waste rock from the Jay Pit will be stored in the new Jay WRSA. The existing Ekati Mine WROMP will be expanded to incorporate the Jay WRSA. Seepage quality will be monitored and reported to the Wek'èezhii Land and Water Board as part of the requirements set out in the Water Licence.	Environmental Management
11.3.2.2.1 Pathway with No Linkage	The Jay WRSA will be constructed following existing Ekati Mine WRSA practices to facilitate permafrost development. Any potentially acid-generating waste rock removed from the Jay Pit will be encapsulated for closure within a thermally-protective cover of non-acid-generating material (in this case 5 m of granite rock). The WRSA will be monitored for long-term thermal performance as part of existing monitoring programs under the WROMP and ICRP.	Environmental Management
11.3.2.2.1 Pathway with No Linkage	The Jay WRSA will be stabilized according to the methods described in the Ekati Mine ICRP and will focus on providing a thermally protective surface cover over potentially acid-generating materials and providing a relatively flat upper surface that discourages snow accumulation.	Environmental Management
11.3.2.2.1 Pathway with No Linkage	Runoff and surface flows will be managed as part of dewatering and minewater management in the Mine Water Management Plan to limit introduction of sediment into receiving waterbodies. Where practical, natural drainage courses will be used to reduce the need for constructed ditches and diversion berms. Existing erosion and sediment control practices (e.g., silt curtains) already in place at the Ekati Mine will be implemented to limit the generation of sediments, metals, and nutrients from changes in surface water. To reduce the potential for erosion in channels or backwatering due to higher than normal water flows and levels, natural drainage courses will be surveyed to evaluate capacity, and then modified, if required.	Environmental Management/Monitoring
11.3.2.2.1 Pathway with No Linkage	Water quality monitoring will occur during the Project and water will not be released to the surrounding environment unless it meets discharge criteria. Areas of exposed soils may require localized repair of erosion and re-vegetation to stabilize and prevent erosion (BHP Billiton 2011). This work will be based on experience gained through operations and closure of other areas of the Ekati Mine and is summarized in the ICRP.	Environmental Management/Monitoring Water Quality
11.3.2.2.1 Pathway with No Linkage	Mitigation identified in the existing Ekati Mine Spill Contingency Plan and environmental design features will be in place to limit the frequency and extent of spills that have potential to occur during Project activities. Hazardous materials and fuel will be stored, transported, and handled according to regulatory requirements to protect the environment and workers. Bulk fuel storage for the Project is within bermed containment areas. Emergency spill kits will be provided wherever hazardous materials or fuel are stored and transferred.	Environmental Management
11.3.2.2.1 Pathway with No Linkage	Hydrocarbon-impacted soil with average particle size less than 4 centimetres (cm) will be contained in the existing landfarm. Hydrocarbon-impacted soil that is unsuitable for on-site treatment will be temporarily stored in the landfarm until it is shipped off site for proper disposal (Section 3.4.1.8.5). Hydrocarbon impacted snow and ice will be contained in the containinated snow containment facility (Section 3.4.1.8.6). Individuals working on site and handling hazardous materials will be trained in spill response as per the Spill Contingency Plan.	Environmental Management
11.3.2.2.1 Pathway with No Linkage	Mitigations and management identified in Ekati Mine's existing Wastewater and Processed Kimberlite Management Plan (WPKMP) and environmental design features will be in place to limit the potential for pipeline failure. The integrity and performance of the pumping and pipeline systems will be monitored throughout the Project construction and operations phases to prevent the unintentional release of minewater to the environment. In the event of any leaks and spills from the pipeline, clean-up will follow existing procedures in place at Ekati Mine.	Environmental Management/Monitoring
11.3.2.2.2 Secondary Pathways	Environmental design features and mitigation have been incorporated into the Project to reduce potential effects from dust deposition (Table 11.3.1). For example, dust suppression will be applied as appropriate to roads, airstrip, and laydown areas and speed limits are established on all roads to reduce the production of dust	Environmental Management/Monitoring



Section of the DAR	Commitment Description	Subject/Component
11.3.2.2.2 Secondary Pathways	Key mitigation and environmental design features to reduce the potential for permafrost melting are:	Environmental Management/Monitoring
	Design of the Project minimizes the construction of new buildings, roads, pads, or excavations that might have an effect on permafrost.	
	Footprints of the WRSAs and other structures will be optimized to limit surface disturbance to the extent practical.	
	Disturbance will be limited to only those areas required for construction and operation of the Project.	
	Buildings will be insulated to minimize heat loss, and will be dismantled as part of reclamation activities.	
11.3.2.2.2 Secondary Pathways	Routine monitoring will be completed to evaluate the presence of non-native invasive plant species including European stickseed. If non-native invasive species are identified, a response plan will be established as per current practice at the Ekati Mine. In the event new equipment is brought to the Ekati Mine for the Jay Project, all equipment will be cleaned to reduce the potential for introduction or spread of non-native invasive species, according to established practices at Ekati Mine.	Vegetation/ Environmental Management/Monitoring
11.3.2.2.2 Secondary Pathways	Local seed collection will continue per established practice for reclamation through direct seeding of nursery propagation. Certified seed will be used for reclamation activities, as per the existing Ekati Mine ICRP. Some plant species have both native and alien invasive subspecies and varieties. Species used in seed mixes will be checked with the invasive species list so that alien invasive subspecies and varieties are not used in seed mixes during reclamation. If non-native invasive species are identified, a response plan will be established as per current practice at the Ekati Mine.	Vegetation
11.3.2.2.2 Secondary Pathways	Discharge flow rates will be managed to reduce the potential for soil loss through erosion and changes to riparian vegetation.	Environmental Management
11.3.2.2.2 Secondary Pathways	Back-flooding will be managed to minimize adverse effects in source waterbodies and downstream. Following back-flooding of the Jay Pit, baseline water levels in Lac du Sauvage are anticipated to be re- established. The riparian (shoreline) and littoral (shallow) areas around the perimeter of Lac du Sauvage at the re-established water elevation will be reclaimed where necessary to enable natural regrowth of riparian and aquatic vegetation. The reclamation work is expected to include localized repair of erosion, and re-vegetation of select areas with aquatic and riparian plants as necessary. This work will be based on experience gained through reclamation research of riparian areas and operations and closure of other areas of the Ekati Mine.	Vegetation/ Reclamation
11.3.2.2.2 Secondary Pathways	Lac du Sauvage water levels and outflow discharges will monitored, and pit back-flooding rates may be adjusted during low water years.	Environmental Management
11.4.2.2.2 Changes to Listed Plant Species and Listed Plant Species Habitat Potential	Locations of territorial listed species identified during the 2014 field survey are within areas expected to be disturbed by the Project (Map 11.4-4). The following mitigation will be used to reduce effects on known locations containing listed plant species:	Vegetation
	Disturbance of vegetation will be limited to the minimum extent necessary for construction and operation of the Project.	
	Locations of listed plant species will be avoided to the extent feasible.	
11.7 Follow up and Monitoring	Monitoring for vegetation will involve:	Vegetation/ Monitoring
	• As part of the annual Wildlife Effects Monitoring Program, once the Project is constructed, the Project footprint will be delineated to determine the actual extent of the physical footprint and associated loss of plant communities (habitat) for comparison with that predicted in the DAR.	
	Monitoring will be continued during the Project as part of the ICRP. Lessons-learned will be applied to the reclamation of the Jay Project components.	
	Monitoring will also include surveys for non-native invasive plant species following construction.	
11A	Soils	
11A1.3.2.1 Review of Mitigation Effectiveness	 Mitigation policies and procedures related to soils and eskers that have been implemented at the Ekati Mine will be expanded to include the Project. Mitigation and associated monitoring of mitigation effectiveness has been completed as part of several existing Ekati Mine plans, including: the Waste Rock and Ore Storage Management Plan (WROMP); the Interim Closure and Reclamation Plan (ICRP) including vegetation trials and monitoring of plant establishment and growth; 	Environmental Management
	 the Spill Contingency Plan: and 	
	 the Hydrocarbon Impacted Materials Management Plan. 	
11A1.3.2.1 Review of Mitigation Effectiveness	Existing monitoring and management programs will be applied to the Project to monitor and/or mitigate effects that can change soils and eskers. Further, adaptive management will continue to be implemented to improve effectiveness of mitigations, based on results of monitoring at the Ekati Mine.	Environmental Management
11A1.3.2.2 Pathway Screening	Design of the Jay Project minimizes the construction of new buildings, roads, pads, or excavations that might affect permafrost by using existing infrastructure.	Soils/ Mitigation/ Design/
	Soil disturbance will be limited to only those areas required for construction and operation of the Project.	Environmental Management
	Footprints of the WRSA and other structures will be optimized to limit surface disturbance to the extent practical.	
	Access roads will be as narrow as feasible, while maintaining safe construction and operation practices.	
	Buildings will be insulated to minimize heat loss, and will be dismantled as part of reclamation activities.	
	Drainage around infrastructure will be managed to reduce pooling of water at the surface.	
	Thaw-sensitive slopes will be insulated.	
	Coarser materials will be used for road construction to minimize frost effects.	



Section of the DAR	Commitment Description	Subject/Component
11A1.3.2.2 Pathway Screening	The Project will maximize the use of the existing infrastructure to reduce the environmental footprint to the extent practical.	Soils/ Mitigation/ Design/
	The new access roads will be as narrow as feasible, while maintaining safe construction and operation practices.	Environmental Management
	Footprints of the WRSAs and other structures will be optimized to limit surface disturbance to the extent practical.	
	A pipe bench will be constructed to accommodate the pipelines, which will follow existing and proposed road alignments to the extent practical to minimize the Project footprint.	
	Soil disturbance will be limited to only those areas required for construction and operation of the Project.	
	• Siting and construction of the Project will be planned to avoid environmentally sensitive areas to the extent practical (e.g., critical wildlife habitat, rare plants and wildlife species, and wetlands).	
	Design of the Jay Project minimizes the construction of new buildings, roads, pads, or excavations by using existing infrastructure.	
	• The existing Misery and Lynx Pits will be used for dewatering and minewater management, limiting the requirement for additional areas to be disturbed for minewater management.	
	Upper soil material, lake bed sediments, and glacial till overburden may be salvaged, to the extent practical, for possible future use in reclamation.	
	Best management practices already in place at the Ekati Mine will be implemented to control erosion and sediment.	
	The existing Ekati Mine ICRP will be amended to include the Project and will be reviewed and approved by the Wek'èezhìi Land and Water Board.	
	 Progressive reclamation of the Project will be completed to the extent practical. 	
	Conditions will continue to be monitored over time to evaluate the success of the ICRP.	
11A1.3.2.2 Pathway Screening	Best management practices already in place at the Ekati Mine will be implemented to control erosion and sediment.	Soils/ Mitigation/ Design/
	Soil disturbance will be limited to only those areas required for construction and operation of the Project.	Environmental Management
	Upper soil material, lake bed sediments, and glacial till overburden will be salvaged, to the extent practical, for possible future use in reclamation.	
	Disturbed areas (e.g., access roads and banks) will be reclaimed according to the approved Closure and Reclamation Plan.	
	Erosion control practices will be applied to salvaged soil to reduce potential erosion and sediment transport off-site such as seeding soil salvage stockpiles.	
	• The height of soil salvage stockpiles will be adjusted so that the size and shape reduces changes to quality, erosion, and loss (e.g., slumping). The Project will be incorporated into the existing ICRP.	
11A1.3.2.2 Pathway Screening	• Established Ekati Mine blasting practices will be used in the dewatered portion of Lac du Sauvage and for blasting of quarry rock, including on-going enhancements that may be developed prior to the start of the Project.	Mitigation
11A1.3.2.2 Pathway Screening	Regular maintenance of equipment will continue at the Ekati Mine.	Mitigation/Environmental Management
	Dust suppression will be applied as appropriate to roads, airstrip, and laydown areas.	
	Speed limits will continue to be applied to limit fugitive dust.	
11A1.3.2.2 Pathway Screening	 Metasediment rock mined from the Jay open pit will be encapsulated within a thermally protective cover layer of granite such that metasediment is frozen into permafrost; this continues the approach successfully established at the Ekati Mine. 	Environmental Management/ Geochemistry
	The existing WROMP, including seepage monitoring, will be expanded to include the Jay WRSA.	
	Thermistors will be installed within the waste rock piles to monitor the progression of permafrost development.	
	Mine rock used to construct the dikes will be non-potentially acid generating (non PAG).	
	The base of the WRSA and kimberlite stockpile/storage areas will be constructed of granite (i.e., non PAG) rock to prevent drainage with low pH.	
11A1.3.2.2 Pathway Screening	Where practical, natural drainage patterns will be unaltered to reduce the use of ditches or diversion berms.	Mitigation/ Design/ Environmental
	• The diversion channel that will be constructed at the Christine Lake outflow (Sub-Basin B Diversion Channel) will be reclaimed at closure so that water flows through the natural drainage pattern to	Management
	Culverts will be installed along site access roads, as necessary, to maintain drainage.	
	The road route alignment will minimize stream crossings and limit disturbance to sensitive habitat as feasible	
	 The Sub-Basin B Diversion Channel will be designed to manage flows and minimize potential for erosion and bank instability. 	
	 Dewatering and operational discharges will be monitored for downstream erosion and actions taken to prevent erosion in downstream lakes and channels 	
11A1 3 2 2 Pathway Screening	The Sub-Basin B Diversion Channel will be designed to manage flows and minimize potential for suspended sediment generation from bed and bank erosion	Mitigation/ Design/ Environmental
	Construction and monitoring of settling/sediment ponds and/or water treatment areas will be part of dewatering and minewater management	Management
	Water quality monitoring for total suspended solids will be completed during the dewatering period	
	 Standard erosion and sediment control measures (e.g., silt curtains, runoff management) will be used during construction, where appropriate 	



Section of the DAR	Commitment Description	Subject/Component
11A1.3.2.2 Pathway Screening	 The existing ICRP will be expanded to include the Jay Project. Dike breaching and re-flooding of the dewatered area will be done in a controlled manner so water levels will be equalized on both sides of the dike and back-flooding will be managed to avoid adverse impacts in source waterbodies and downstream. Water quality monitoring for total suspended solids will be completed during the back-flooding period. During excavation of dike breaches, silt curtains and other sediment and turbidity mitigation will be used, as appropriate. Reclamation of shoreline and shallow areas within the diked area will include localized repair of erosion and revegetation with aquatic and riparian plants, as necessary. 	Mitigation/ Environmental Management/ Reclamation
11A1.3.2.2 Pathway Screening	 Following established WRSA practices, potentially acid generating metasediment rock will be encapsulated within a thermally protective cover layer of granite to facilitate permafrost development. The existing WROMP, including seepage monitoring, will be expanded to include the Jay WRSA. Thermistors will be installed within the WRSA to monitor the progression of permafrost development. 	Environmental Management
11A1.3.2.2 Pathway Screening	 The existing Spill Contingency Plan is in place and will be expanded to include the Jay Project. Equipment will be regularly maintained (e.g., regular checks for leaks). Drip trays and/or absorbent pads will be used during servicing and refuelling. Hazardous substances will be stored and handled on site in accordance with applicable regulations. Fuel is stored at a central bulk fuel farm at the Ekati main camp and at satellite fuel farms located at Misery, Fox, and Koala North. Fuel tanks are housed within bermed containment areas. The Project will follow Ekati's standard policies in the event of a spill; spill response training is provided and updated. Soil and snow affected by hydrocarbon spills will continue to be handled in accordance with the existing Hydrocarbon-impacted Materials Management Plan and will be remediated in the landfarm or shipped off-site. Minewater and fine processed kimberlite slurry pipelines will be monitored and inspected throughout construction (i.e., dewatering of diked area), operations, and closure. Any leaks or spills identified along the pipelines will be addressed immediately and clean-up, if required, will be implemented following the existing Spill Contingency Plan. 	Mitigation/ Environmental Management
11A1.3.2.2.1Pathways with No Linkage	Mitigation identified in the existing Ekati Mine Spill Contingency Plan and environmental design features will be in place to limit the frequency and minimize the extent of spills that have potential to occur during Project activities. Hazardous materials and fuel will be stored, transported and handled according to regulatory requirements to protect the environment and workers. Bulk fuel storage for the Project is within bermed containment areas. Emergency spill kits will be provided wherever hazardous materials or fuel are stored and transferred.	Mitigation/ Environmental Management
11A1.3.2.2.1Pathways with No Linkage	Hydrocarbon-impacted soil with average particle size less than 4 cm will be contained in the existing landfarm. Hydrocarbon-impacted soil that is unsuitable for on-site treatment will be temporarily stored in the landfarm until it is shipped off site for proper disposal (Section 3.4.1.8.5). Hydrocarbon-impacted snow and ice will be contained in the contaminated snow containment facility (Section 3.4.1.8.6). Individuals working on site and handling hazardous materials will be trained in spill response as per the Spill Contingency Plan.	Mitigation/ Environmental Management
11A1.3.2.2.1Pathways with No Linkage	Mitigations and management identified in the existing Wastewater and Processed Kimberlite Management Plan and environmental design features will be in place to limit the potential for pipeline failure. The integrity and performance of the pumping and pipeline systems will be monitored throughout the Project construction and operations phases to prevent the unintentional release of minewater to the environment. If any leaks and spills occur from the pipeline, clean-up will follow existing procedures in place at the Ekati Mine.	Mitigation/ Environmental Management
11A1.3.2.2.2 Secondary Pathways	 Key mitigation and environmental design features to reduce the potential for permafrost melting are: design of the Project minimizes the construction of new buildings, roads, pads, or excavations that might have an effect on permafrost; footprints of the WRSAs and other structures will be optimized to limit surface disturbance to the extent practical; soil disturbance will be limited to only those areas required for construction and operation of the Project; and, buildings will be insulated to minimize heat loss, and will be dismantled as part of reclamation activities, which will allow for a return to stable permafrost conditions. 	Design/ Mitigation/ Environmental Management
11A1.3.2.2.2 Secondary Pathways	The riparian (shoreline) and littoral (shallow) areas around the perimeter of Lac du Sauvage at the re-established water elevation will be reclaimed where necessary to limit loss of soil through erosion. The reclamation work is expected to include localized repair of erosion, and re-vegetation of select areas with aquatic and riparian plants. This work will be based on experience gained through operations and closure of other areas of the Ekati Mine.	Reclamation
11A1.3.2.2.2 Secondary Pathways	Environmental design features and mitigation have been included to limit loss of soils through erosion from dewatering and back-flooding refilling the diked area in Lac du Sauvage. Lac du Sauvage water levels and Lac du Sauvage outflow discharges will be monitored, and pit back-flooding refilling rates may be adjusted during low water years.	Design/ Environmental Management
11A1.6 Follow-Up and Monitoring	Dewatering Plans that will be developed prior to dewatering under the Water Licence will include a description of specific operational erosion monitoring and mitigation programs that will be applied. A soils investigation will be completed for the Sub-Basin B Diversion Channel to verify the nature and ice content of soils to be excavated, which will enable an appropriate mitigation-design approach.	Environmental Management / Soils



Section of the DAR	Commitment Description	Subject/Component
Section 12	Barren Ground Caribou	
12.3.3.2.2 Pathway Screening	 The Project maximizes the use of the existing infrastructure to reduce the environmental footprint to the extent practical. The new access roads will be as narrow as feasible, while maintaining safe construction and operation practices. Only one access road crosses the Lac du Sauvage ester. 	Caribou/ Mitigation/ Design/ Environmental Management
	 The Jay WRSA is set back 200 m from the Lac du Sauvage esker. 	
	 Kimberlite stockpile areas have been designed in strategic locations that facilitate continued mine operations through various types of road closures. The Jay power line will parallel the haul road to avoid additional fragmentation and reduce the environmental footprint as much as possible. 	
	Footprints of the WRSAs and other structures will be optimized to limit surface disturbance to the extent practical.	
	A pipe bench will be constructed to accommodate the pipelines, which will follow existing and proposed road alignments to the extent practical, to minimize the Project footprint.	
	Soil disturbance will be limited to only those areas required for construction and operation of the Project.	
	• Siting and construction of the Project will be planned to avoid environmentally sensitive areas (e.g., critical wildlife habitat, listed plants and wildlife species, and wetlands) to the extent practical.	
	Design of the Jay Project minimizes the construction of new buildings, roads, pads, or excavations.	
	• The existing Misery Pit will be used for minewater storage (permanently or temporarily) for settlement of solids (i.e., total suspended solids), limiting the requirement for additional areas to be altered for minewater storage.	
	Management practices already in place at the Ekati Mine will be implemented to control erosion and sediment.	
	The existing Ekati Mine ICRP will be amended to include the Project.	
	Conditions will continue to be monitored over time to evaluate the success of the ICRP and, using adaptive management and newer proven methods as available, adjust the ICRP, if necessary.	
12.3.3.2.2 Pathway Screening	The WEMP implemented at the Ekati Mine will include the Jay Project, provide feedback for adaptive management.	Caribou/ Mitigation/ Environmental
	• The current, effective practices and mitigations for safety of wildlife on roads, airstrip and other areas of the mine will be continued and expanded as necessary to include the Jay Project. These practices include reporting of wildlife sightings by all employees, deterring wildlife from hazardous areas, and control of encounters by Environment staff.	Management
12.3.3.2.2 Pathway Screening	Regular maintenance of equipment will continue at the Ekati Mine.	Mitigation/ Environmental Management
	Dust suppression will be applied, consistent with current practices, to haul roads, the airstrip, and other high traffic areas.	
	Speed limits will continue to be applied to limit fugitive dust.	
	Salvaged soil materials stockpiles or exposed soils will be seeded, where necessary, to reduce wind erosion.	
12.3.3.2.2 Pathway Screening	Water quality is monitored and managed through the Water Licence, including the WPKMP, AEMP and SNP. Water quality discharge criteria are provided in the Water Licence, which will be extended to include the Jay Project.	Monitoring/ Environmental Management
	Vegetation and air quality are monitored under the Air Quality Management and Monitoring Program (AQMMP).	
	Feedback from these monitoring programs can be applied to adaptive management to mitigate effects.	
12.3.3.2.2 Pathway Screening	Use of existing surface facilities will limit the area disturbed at construction and limit the quantity of new sensory disturbances.	Caribou/ Mitigation/ Design/ Environmental Management/
	Only one access road crosses the Lac ou Sauvage esker. The law WPSA is set back 200 m from the Lee du Sauvage esker.	Monitoring
	The Jay WRSA is set back 200 m from the Lac du Sauvage esker. Kimbarlite steelnile steel have been designed in strategie lesetions that facilitate continued mine encretions through various times of read elecures.	
	 Rimberine stockpile areas have been designed in strategic locations that facilitate continued mine operations through various types of road closures. The current, effective practices and mitigations for safety of wildlife on roads, the airstrip, and other areas of the mine will be continued and expanded as necessary to include the Jay Project. These practices is the bell were the	
	 A minimum flying altitude of 600 m above ground level (except during takeoff and landing, and during field work) will be maintained for cargo, passenger aircraft, and helicopters outside of the Project site. 	
	Environmental training will be provided for personnel.	
	The WEMP implemented at the Ekati Mine will include the Jay Project.	
	Wildlife always have the right-of-way.	
	Vehicles encountering wildlife on roads will communicate the presence of wildlife on the roads to the Environment Department and others in the area.	
	Modified traffic patterns and road closures will be used as necessary to protect caribou and people.	
12.3.3.2.2 Pathway Screening	Only one access road crosses the Lac du Sauvage esker.	Caribou/ Mitigation/ Monitoring/
	• Spatially and temporally staged monitoring of the Bathurst caribou herd will be used to track migratory movements via (i) satellite radiocollars, (ii) aerial reconnaissance surveys near the roads, and (iii) road surveys (i.e., advanced information on approaching caribou).	Environmental Management
	Kimberlite stockpile areas have been designed in strategic locations that facilitate continued mine operations through various types of road closures.	
	• The current, effective practices and mitigations for safety of wildlife on roads, the airstrip, and other areas of the mine will be continued and expanded as necessary to include the Jay Project. These practices include reporting of wildlife sightings by all employees, and control of encounters by Environment staff.	
	Modified traffic patterns and road closures will be used as necessary to protect caribou and people.	



Section of the DAR	Commitment Description
12.3.3.2.2 Pathway Screening	Current mitigation includes deterring and removing wildlife from the airstrip.
	Speed limits are in place.
	Wildlife always have the right-of-way.
	Drivers have standard safety training and are provided with awareness training.
	Appropriate signage is in place to identify areas of high wildlife use.
	• Vehicles encountering wildlife on roads are required to stop and communicate the presence of wildlife on the roads to the Environment Department and others in the area.
	Wildlife mortalities are monitored and reported, which provides feedback for adaptive management.
	Vehicles are restricted to designated roads and prepared work areas (recreational use of off-road vehicles is prohibited).
	The current, effective practices and mitigations for safety of wildlife on roads, the airstrip, and other areas of the mine will be continued and expanded as necessary to include the include reporting of wildlife sightings by all employees, and control of encounters by Environment staff. There have been no incidents of caribou mortality caused by vehicle collisi
	Modified traffic patterns and road closures will be used as necessary to protect caribou and people.
12.3.3.2.2 Pathway Screening	Apply the Waste Management Plan, Landfill Management Plan, and Incinerator Management Plan.
	The WEMP is implemented at the Ekati Mine and will be amended to incorporate the Jay Project; wildlife activity will be monitored at waste management areas.
	The efficiency of the waste management program will be reviewed regularly and improved through adaptive management where practical.
	Separate bins will be located throughout the accommodations complex, shops, and other facilities on-site for immediate sorting of domestic wastes.
	Food wastes will be collected in specific bins before transport directly to the incinerator storage area for incineration.
	Littering and the feeding of wildlife is prohibited.
	Raised, heated buildings will be skirted to prevent wildlife access to shelter.
	Education about proper waste management practices and issues surrounding wildlife habituation is provided to all workers and visitors to the site.
	Incinerator is enclosed and camp waste will be burned regularly.
	Landfill sites and waste storage areas will be inspected.
	A chain-link fence is maintained around Misery Camp to prevent wildlife from entering.
	Wildlife are deterred from areas of risk.
12.3.3.2.2 Pathway Screening	Harvest by Non-Aboriginal and Resident hunters is currently regulated by the GNWT ENR, and is currently not permitted along the TCWR or around the Lac de Gras area (hunting R/BC/03, ENR 2014).
12.3.3.2.2 Pathway Screening	Where practical, natural drainage patterns will be unaltered to reduce the use of ditches or diversion berms.
	The Sub-basin B Diversion Channel design will consider wildlife passage.
	Culverts will be installed along site access roads, as necessary, to maintain drainage.
	The road route alignment will minimize stream crossings and limit disturbance to sensitive habitat as feasible.
	The Sub-basin B Diversion Channel will be designed to manage flows and minimize potential for erosion and bank instability.
	• Dewatering and operational discharge will be monitored for downstream erosion, and actions will be taken to prevent erosion in downstream lakes and channels.
12.3.3.2.2 Pathway Screening	Metasediment rock mined from the Jay open pit will be encapsulated within a thermally protective cover layer of granite such that metasediment is frozen into permafrost; this met that was successfully established at the Ekati Mine for the Misery WRSA.
	The existing Ekati Mine WROMP, including seepage monitoring, will be expanded to include the Jay WRSA.
	The WPKMP will be amended to incorporate the Jay Project.
	Thermistors will be installed within the mine rock piles to monitor permafrost.
	Mine rock used to construct the dikes will be non-potentially acid generating (non-PAG).
	• The WRSA will include a basal layer of non-potentially acid generating (non-PAG) granite that enhances permafrost aggradation and physically separates potentially reactive material
	with low pH.
12.3.3.2.2 Pathway Screening	The existing Ekati ICRP will be expanded to include the Jay Project.
	Dike breaching and re-flooding of the dewatered area will be done in a controlled manner so water levels will be equalized on both sides of the dike, and back-flooding will be man effects in source waterbodies and downstream.
	• The diversion channel at the Christine Lake outflow (Sub-Basin B Diversion Channel) will be reclaimed so that water flows through the natural drainage pattern to Lac du Sauvage
	The road route alignment will minimize stream crossings and limit disturbance to sensitive habitat as feasible.
	Water quality monitoring for total suspended solids will be completed during the back-flooding period.
	During excavation of dike breaches, silt curtains and other sediment and turbidity mitigation will be used as appropriate.

	Subject/Component
	Caribou/ Mitigation/ Environmental Management
Jay Project. These practices ons at the Ekati Mine.	
	Environmental Management
g zones R/BC/02 and	Environmental Management
	Design/ Environmental Management
hod continues the approach	Design/ Geochemistry
erials to prevent drainage	
naged to avoid adverse	Environmental Management/ Monitoring / Reclamation
2.	



Section of the DAR	Commitment Description	Subject/Component
12.3.3.2.2 Pathway Screening	Following established Ekati Mine WRSA practices, PAG metasediment rock will be encapsulated within a thermally protective cover layer of granite to facilitate permafrost development.	Environmental Management
	The existing Ekati Mine WROMP, including seepage monitoring, will be expanded to include the Jay WRSA.	
	Thermistors will be installed within the WRSA to monitor permafrost.	
12.3.3.2.2 Pathway Screening	The existing Spill Contingency Plan in place for the Ekati Mine and will be expanded to include the Jay Project.	Mitigation/ Environmental Management
	Regular equipment maintenance (e.g., regular checks for leaks) will continue.	
	Drip trays and/or absorbent pads are used during servicing and refuelling.	
	All hazardous substances are stored and handled on site in accordance with applicable regulations.	
	• Fuel is stored at a central bulk fuel farm at the Ekati Mine main camp, and at satellite fuel farms located at Misery, Fox, and Koala North. Fuel tanks are housed within bermed areas.	
	The Project will follow existing standard policies in the event of a spill; spill response training is provided and updated.	
	• Soil and snow affected by hydrocarbon spills will continue to be handled in accordance with the existing Hydrocarbon-Impacted Materials Management Plan, and will be remediated in the landfarm or shipped off-site.	
12.3.3.2.2 Pathway Screening	• Mine water and fine processed kimberlite slurry pipelines will be monitored and inspected throughout construction, operations, and closure. Additional mitigation will be applied, if required.	Mitigation/ Environmental Management
	Any leaks or spills identified along the pipelines will be addressed immediately, and clean-up, if required, will be implemented following the existing Spill Contingency Plan.	
12.3.2.2.1 Pathways with no Linkage	Dominion Diamond is committed to completing an ecological risk assessment to determine the potential for adverse effects on wildlife population health associated with exposure to chemicals from the Project.	Wildlife
12.3.2.2.1 Pathways with no Linkage	Back-flooding will be managed to minimize adverse effects in source waterbodies and downstream. Following back-flooding of the Jay Pit, baseline water levels in Lac du Sauvage are anticipated to be re- established. The riparian (shoreline) and littoral (shallow) areas around the perimeter of Lac du Sauvage at the re-established water elevation will be reclaimed where necessary to enable natural regrowth of riparian and aquatic vegetation. The reclamation work is expected to include localized repair of erosion, and re-vegetation of select areas with aquatic and riparian plants as necessary. This work will be based on experience gained through operations and closure of other areas of the Ekati Mine.	Reclamation
12.3.2.2.1 Pathways with no Linkage	Environmental design features and mitigation will be implemented to limit loss of soils through erosion, and to reduce the changes in the quantity and composition of wetland and riparian plant communities from dewatering and back-flooding the diked area in Lac du Sauvage. Lac du Sauvage water levels and Lac du Sauvage outflow discharges will be monitored, and pit back-flooding rates may be adjusted during low water years.	Design/ Mitigation/ Environmental Management
12.3.2.2.1 Pathways with no Linkage	Waste rock from the Jay Pit will be stored in the new Jay WRSA. The existing WROMP will be expanded to incorporate the Jay WRSA. Seepage quality will be monitored and reported to the Wek'ezhi Land and Water Board as part of the requirements set out in the Water Licence. The Jay WRSA will be constructed following existing Ekati Mine WRSA practices to facilitate permafrost development. Any PAG waste rock removed from the Jay Pit will be encapsulated for closure within a thermally protective cover of non-potentially acid generating material (in this case 5 m of granite rock). The WRSA will be monitored for long-term thermal performance as part of existing monitoring programs under the WROMP and ICRP.	Design/ Environmental Management/ Geochemistry
12.3.2.2.1 Pathways with no Linkage	Water will be transferred between mine water management areas via pumping and pipeline systems. Mitigations and management identified in the existing WPKMP and environmental design features will be in place to limit the potential for pipeline failure. The integrity and performance of the pumping and pipeline systems will be monitored throughout the Project construction and operations phases to prevent the unintentional release of minewater to the environment. If any leaks and spills occur from the pipeline, clean-up will follow existing procedures in place at the Ekati Mine.	Environmental Management
12.3.2.2.2 Secondary Pathways	The implementation of environmental design features (Table 12.3-1) and actions identified through the Wildlife Effects Monitoring Plan (WEMP) are expected to further decrease the risk to animals from physical hazards on-site. Mitigations will include the following:	Design/ Monitoring/ Caribou
	Roads and the Sub-Basin B Diversion Channel will be constructed with caribou crossings that reduce risk of injury related to coarse road fill.	
	Blasting in the pit and quarry, if necessary, will be carefully planned and controlled to minimize fly rock that might injure caribou.	
	• The use of guy wires for power poles will be minimized as much as feasible, and those guy wires that are required will be made more visible with coloured plastic sleeves to reduce risk of injury to caribou.	
	Ramps to facilitate the access and egress of wildlife from the WRSAs will be constructed for closure.	
12.3.2.2.2 Secondary Pathways	Wildlife deterrent actions will be implemented by knowledgeable and trained personnel.	Management
12.3.2.2.2 Secondary Pathways	The following environmental design features and mitigation are expected to limit the risk from vehicle and aircraft collisions with caribou at the Ekati Mine:	Caribou/ Design/ Mitigation
	wildlife have the right-of-way;	
	road design limits blind spots where possible to reduce the risk of accidental wildlife-human encounters;	
	• speed limits are established; and,	
	• drivers will be alerted using signage and radio when wildlife are moving through an area, and speed limits will be further reduced as appropriate.	



Section of the DAR	Commitment Description	Subject/Component
12.3.2.2.2 Secondary Pathways	Environmental design features and mitigation strategies have been established to reduce the numbers of carnivores attracted to the Project (Table 12.3-1). A Waste Management Plan as approved by the Wek'èezhii Land and Water Board is in place that works in concert with the WEMP to effectively manage various types of wastes, including wildlife attractants. These strategies include the following:	Design / Environmental Management/ Wildlife
	Workers and visitors to the site are educated about the importance of proper waste management practices.	
	People are educated on the risks associated with feeding wildlife and careless disposal of food garbage.	
	Separate bins are located throughout facilities on-site for immediate sorting of domestic waste.	
	Food waste is stored inside for transport directly to the incinerator for incineration.	
	Incinerator ash from combustion of kitchen and office waste is stored inside and transported to the landfill.	
	The landfill is covered regularly with crushed or mine rock.	
	Ongoing review of the efficiency of the waste management program and improvement through adaptive management.	
12.4.2.2.2 Results	Modified traffic patterns and road closures will be used as necessary to mitigate barrier effects to caribou.	Caribou / Environmental Management
12.6.2 Results	Deflections in animal movement from increased traffic on the Misery and Jay roads could adversely affect migration and connectivity of the Bathurst caribou herd. The expansion of the Ekati Mine monitoring program during migration periods will identify concentrations and movements of animals that may interact with the roads.	Caribou / Environmental Management
12.7 Follow Up Monitoring	If monitoring or follow-up detects effects that are different from predicted effects, or the need for improved or modified design features and mitigation, then adaptive management will be implemented. This may include increased monitoring, changes in monitoring plans, or additional mitigation.	Monitoring/ Adaptive Management
12.7 Follow Up Monitoring	Monitoring activities for barren-ground caribou currently are within the scope of the Ekati Mine WEMP (ERM Rescan 2014b) and will be applied to the Project (including construction, operations, and closure). The existing Ekati Mine WEMP is consistent with wildlife and wildlife habitat monitoring guidelines prepared by the GNWT (GNWT-ENR 2013). Wildlife monitoring completed as part of the existing Ekati Mine WEMP includes measuring habitat loss, mine-related wildlife mortalities and interactions with site (including roads), mitigation and waste management effectiveness, and changes to behaviour (ERM Rescan 2014b). Caribou are included in these programs. The Ekati Mine WEMP is designed to:	Monitoring / Caribou
	test impact predictions;	
	evaluate mitigation effectiveness; and,	
	provide evidence for adaptive management.	
12.7 Follow Up Monitoring	As part of compliance monitoring at the Ekati Mine, caribou behaviour monitoring to determine the type and magnitude of caribou responses to the presence and operation of the Ekati Mine is completed annually (ERM Rescan 2014b). Additional caribou monitoring programs currently in place at the Ekati Mine include monitoring caribou activity in the LLCF and monitoring caribou activity near the mine. In addition to mine-related effects monitoring programs, Dominion Diamond has participated or contributed to regional wildlife monitoring initiatives intended for conservation and management including the GNWT's Barren-ground Caribou Management Strategy (GNWT-ENR 2011) and the Bathurst Range Plan Working Group. One initiative that is supported in part by Dominion Diamond is the Bathurst caribou aerial surveys used to determine herd composition, cow:calf ratios, and population estimates. Dominion Diamond is also involved in the Zone of Influence Working Group, which is tasked with determining the most effective methods for future monitoring of caribou distribution near mine sites. These programs provide data to support cumulative effects assessment and management by the GNWT.	Monitoring / Caribou / Regional Initiatives
Section 13	Wildlife and Wildlife Habitat	
13.3.2.2.1 Pathways With No Linkage	Dominion Diamond plans to complete an ecological risk assessment to further demonstrate that there will be no adverse effects on wildlife population health associated with exposure to chemicals from the Project.	Wildlife
13.3.2.1.4 Open Pits	In cases where the safety of the birds is a concern (due to active mine operations), Dominion Diamond staff will actively deter wildlife from the area using bear bangers, trucks, air horns, and helicopters (ERM Rescan 2014a).	Wildlife / Environmental Management
13.3.2.2 Pathway Screening Table 13.3.1	The Project maximizes the use of the existing infrastructure to reduce the environmental footprint to the extent practical.	Wildlife / Design/ Mitigation/
	The new access roads will be as narrow as feasible, while maintaining safe construction and operation practices.	Environmental Management
	Only one access road crosses the Lac du Sauvage esker.	
	The Jay WRSA is set back 200 m from the Lac du Sauvage esker.	
	The existing (Misery) and new (Jay) power lines parallel the haul roads to avoid additional fragmentation and reduce the environmental footprint	
	A pipe bench will be constructed to accommodate the pipelines, which will follow existing and proposed road alignments to the extent practical, to minimize the Project footprint.	
	Soil disturbance will be limited to only those areas required for construction and operation of the Project.	
	• Siting and construction of the Project will be planned to avoid environmentally sensitive areas (e.g., critical wildlife habitat, listed plants and wildlife species, and wetlands) to the extent practical.	
	Design of the Jay Project minimizes the construction of new buildings, roads, pads, or excavations.	
	• The existing Misery and Lynx Pits will be used for dewatering and mine water management, limiting the requirement for additional areas to be disturbed for mine water management.	
	Environmental monitoring programs already in place at the Ekati Mine will be extended to incorporate construction and operation of the Jay Project.	
	Management practices already in place at the Ekati Mine will be implemented to control erosion and sediment.	
	The existing Ekati Mine IRCP will be amended to include the Project.	
	Conditions will continue to be monitored over time to evaluate the success of the IRCP and, using adaptive management and newer proven methods as available, to adjust the IRCP, as necessary and appropriate.	



Section of the DAR	Commitment Description	Subject/Component
13.3.2.2 Pathway Screening Table 13.3.1	The WEMP implemented at the Ekati Mine will include the Jay Project.	Wildlife / Design/ Mitigation/
	Site environmental technicians will investigate all wildlife incidents and mortalities, report to government, and recommend follow-up.	Environmental Management
	Wildlife will be deterred from areas of risk.	
	Mitigation is currently in place to minimize human-wildlife interactions, including awareness training.	
	Pit wall monitoring procedures for raptor nests implemented at the Ekati Mine will include the Jay Project.	
	Birds showing nesting activity in areas of critical risk will be actively deterred.	
	 Animals will be deterred from entering the diked area where most fly rock will occur (until pit is too deep for escape of fly rock). 	
13.3.2.2 Pathway Screening Table 13.3.1	• The power line will incorporate perching deterrents on poles including cone-shaped pole caps and cross arm perch preventers to prevent large birds from perching and nesting on poles or on dangerous areas around phase conductors.	Wildlife / Design/ Mitigation/ Environmental Management
	• Bird deterrents (e.g., spinning reflectors) will be installed on the power line in areas of concern (e.g., near waterbodies known to represent staging areas) and identified through monitoring of bird strikes along the power line	
13.3.2.2 Pathway Screening Table 13.3.1	If vegetation clearing is required, activities will be managed to comply with the Species at Risk Act and the Migratory Birds Convention Act.	Wildlife / Environmental Management
13.3.2.2 Pathway Screening Table 13.3.1	Regular maintenance of equipment will continue at the Ekati Mine.	Mitigation/ Environmental Management
	Dust suppression will be applied as appropriate to roads, airstrip, and laydown areas.	
	Speed limits will continue to be applied to limit fugitive dust.	
13.3.2.2 Pathway Screening Table 13.3.1	 Water quality is monitored and managed through the Water Licence, including the WPKMP, Aquatics Effects Monitoring Program and Surveillance Network Program. Water quality discharge criteria are provided in the Water Licence, which will be extended to include the Jay Project 	Mitigation/ Environmental Management
	Spill mitigation and response plans are in effect.	
	The small, intermittent water pond at the landfarm is covered with flagging to prevent bird landings.	
13.3.2.2 Pathway Screening Table 13.3.1	Use of existing surface facilities will limit the area disturbed at construction and limit the quantity of new sensory disturbances.	Wildlife / Design/ Mitigation/ Monitoring/
	Only one access road crosses the Lac du Sauvage esker.	Environmental Management
	The Jay WRSA is set back 200 m from the Lac du Sauvage esker.	
	Kimberlite stockpile areas have been designed in strategic locations that facilitate continued mine operations through various types of road closures.	
	 The current, effective practices and mitigations for safety of wildlife on roads, airstrip and other areas of the mine will be continued and expanded as necessary to include the Jay Project. These practices include reporting of wildlife sitings by all employees, and control of encounters by Environment staff. 	
	A minimum flying altitude of 600 m above ground level (except during takeoff and landing and field work) will be maintained for cargo, passenger aircraft, and helicopters outside of the Project site.	
	Environmental sensitivity training will be provided for personnel.	
	The WEMP implemented at the Ekati Mine will include the Jay Project.	
	Wildlife always have the right-of-way.	
	 Vehicles are restricted to designated roads and prepared work areas (recreational use of off-road vehicles is prohibited). 	
13.3.2.2 Pathway Screening Table 13.3.1	Current mitigation includes deterring and removing wildlife from the airstrip.	Wildlife / Design/ Mitigation/
	Speed limits are in place.	Environmental Management
	Wildlife always have the right-of-way.	
	Drivers have standard safety training and are provided with awareness training.	
	Appropriate signage is in place to identify areas of high wildlife use.	
	Vehicles encountering wildlife on roads are required to stop and communicate the presence of wildlife on the roads to the Environment Department and others in the area.	
	 Vehicles are restricted to designated roads and prepared work areas (recreational use of off-road vehicles is prohibited). 	
	• The current, effective practices and mitigations for safety of wildlife on roads, airstrip and other areas of the mine will be continued and expanded as necessary to include the Jay Project. These practices include reporting of wildlife sightings by all employees, and control of encounters by Environment staff. There have been no incidents of caribou mortality caused by vehicle collisions at the Ekati Mine.	



Section of the DAR	Commitment Description	Subject/Component
13.3.2.2 Pathway Screening Table 13.3.1	 Apply the Waste Management Plan, Landfill Management Plan, and Incinerator Management Plan. The WEMP is implemented at the Ekati Mine and will be amended to incorporate the Jay Project; wildlife activity will be monitored at waste management areas. The efficiency of the waste management program will be reviewed as needed and improved through adaptive management where practical. Separate bins will be located throughout the accommodations complex, shops, and other facilities on-site for immediate sorting of domestic wastes. Food wastes will be collected in specific bins for transport directly to the incinerator storage area for incineration. Littering and feeding of wildlife is prohibited. Raised, heated buildings will be skirted to prevent wildlife access to shelter under the buildings. Education and reinforcement of proper waste management practices and issues surrounding habituation is provided to all workers and visitors to the site. Incinerator is enclosed and camp waste is burned regularly. Landfill sites and waste storage areas will be inspected. A chain-link fence is maintained around Misery Camp to prevent wildlife from entering. Wildlife are deterred from areas of risk. 	Wildlife / Design/ Mitigation/ Environmental Management
13.3.2.2 Pathway Screening Table 13.3.1	 Only one access road crosses the Lac du Sauvage esker. Spatially and temporally staged monitoring of Bathurst caribou herd to track migratory movements via (i) satellite radiocollars, and (ii) road surveys (i.e., advanced information on approaching caribou). Kimberlite stockpile areas have been designed in strategic locations that facilitate continued mine operations through various types of road closures. The current, effective practices and mitigations for safety of wildlife on roads, airstrip and other areas of the mine will be continued and expanded as necessary to include the Jay Project. These practices include reporting of wildlife sightings by all employees, and control of encounters by Environment staff. Modified traffic patterns and road closures will be used as necessary to protect caribou and people. 	Wildlife / Design/ Mitigation/ Environmental Management
13.3.2.2 Pathway Screening Table 13.3.1	 Metasediment rock mined from the Jay open pit will be encapsulated within a thermally protective cover layer of granite such that metasediment is frozen into permafrost; this continues the approach successfully established at the Ekati Mine. The existing Ekati WROMP, including seepage monitoring, will be expanded to include the Jay WRSA. Thermistors will be installed within the mine rock piles to monitor permafrost. Mine rock used to construct the dikes will be non-acid generating (NAG). The WRSA will include a basal layer of non-acid generating granite that enhances permafrost aggradation and physically separates potentially reactive materials to prevent drainage with low pH. 	Design/ Mitigation/ Environmental Management / Geochemistry
13.3.2.2 Pathway Screening Table 13.3.1	 Where practical, natural drainage patterns will be unaltered to reduce the use of ditches or diversion berms. The diversion channel that will be constructed at the Christine Lake outflow (Sub-basin B Diversion Channel) will be reclaimed so that water flows through the natural drainage pattern to Lac du Sauvage. Culverts will be installed along site access roads, as necessary, to maintain drainage. The road route alignment will minimize stream crossings and limit disturbance to sensitive habitat as feasible. 	Design/ Environmental Management
13.3.2.2 Pathway Screening Table 13.3.1	 The Sub-Basin B diversion channel will be designed to manage flows and minimize potential for erosion and bank instability. Dewatering and operational discharges will be monitored for downstream erosion and actions will be taken to prevent erosion in downstream lakes and channels Water quality monitoring for total suspended solids will be completed during the dewatering period. Standard erosion and sediment control measures (e.g., silt curtains, runoff management) will also be used during construction around areas to be disturbed, where appropriate. 	Design/ Mitigation/ Monitoring/ Environmental Management
13.3.2.2 Pathway Screening Table 13.3.1	• Established risk mitigation practices will be taken to reduce risk of mortalities of loons from nets based on experience at the Ekati Mine and other recent northern fish-out projects .	Mitigation / Environmental Management
13.3.2.2 Pathway Screening Table 13.3.1	 The existing ICRP will be expanded to include the Jay Project. Dike breaching and re-flooding of the dewatered area will be done in a controlled manner so water levels will be equalized on both sides of the dike and back-flooding will be managed to avoid adverse effects to source waterbodies and downstream. Water quality monitoring for total suspended solids will be completed during the back-flooding period. During excavation of dike breaches, silt curtains and other sediment and turbidity mitigation will be used as appropriate. Reclamation of shoreline and shallow areas within the diked area will include localized repair of erosion and revegetation with aquatic and riparian plants, as necessary. 	Environmental Management / Reclamation
13.3.2.2 Pathway Screening Table 13.3.1	 Following established Ekati WRSA practices, PAG metasediment rock will be encapsulated within a thermally protective cover layer of granite to facilitate permafrost development. The existing Ekati WROMP, including seepage monitoring, will be expanded to include the Jay WRSA. Thermistors will be installed within the mine rock piles to monitor permafrost. 	Design /Environmental Management



Section of the DAR	Commitment Description	Subject/Component
13.3.2.2 Pathway Screening Table 13.3.1	 The existing Spill Contingency Plan in place for the Ekati Mine will be expanded to include the Jay Project. Regular equipment maintenance (e.g., regular checks for leaks) will continue. 	Mitigation / Environmental Management
	 Drip travs and/or absorbent pads are used during servicing and refuelling. 	
	 Hazardous substances are stored and handled on site in accordance with applicable regulations. 	
	• Fuel is stored at a central bulk fuel farm at the Ekati main camp and at satellite fuel farms located at Misery, Fox, and Koala North. Fuel tanks are housed within bermed areas.	
	The Project will follow Ekati's standard policies in the event of a spill; spill response training is provided and updated.	
	Soil and snow affected by hydrocarbon spills will continue to be handled in accordance with the existing Hydrocarbon-impacted Materials Management Plan and will be remediated in the landfarm or shipped off-site.	
	Dewatering and mine water management in the WPKMP will include the pipelines used for ongoing water management of the Jay Pit.	
	• Minewater and fine processed kimberlite slurry pipelines will be monitored and inspected throughout construction (i.e., dewatering of diked area), operations, and closure. Additional mitigation will be applied, if required.	
	Any leaks or spills identified along the pipelines will be addressed and clean-up, if required, will be implemented following the existing Spill Contingency Plan.	
13.3.2.2.1 Pathways With No Linkage	Waste rock from the Jay Pit will be stored in the new Jay WRSA. The existing Ekati Waste Rock and Ore Storage Management Plan (WROMP) will be expanded to incorporate the Jay WRSA. Seepage quality will be monitored and reported to the Wek'ezhii Land and Water Board as part of the requirements set out in the Water Licence.	Environmental Management / Monitoring
13.3.2.2.1 Pathways With No Linkage	The Jay WRSA will be constructed following existing WRSA practices to facilitate permafrost development. Any potentially acid-generating waste rock removed from the Jay Pit will be encapsulated for closure within a thermally-protective cover of non-acid generating material (in this case 5 m of granite rock). The WRSA will be stabilized according to the methods described in the Ekati Mine ICRP and will focus on providing a thermally protective surface cover over PAG materials, providing a relatively flat upper surface that discourages snow accumulation, and providing for wildlife safety through caribou emergency egress ramps. The WRSA will then be monitored for long-term thermal performance as part of existing monitoring programs under the WROMP and Interim Closure and Reclamation Plan (ICRP).	Design /Geochemistry / Environmental Management
13.3.2.2.1 Pathways With No Linkage	Water will be transferred between mine water management areas via pumping and pipeline systems. Mitigations and management identified in Ekati's existing WPKMP and environmental design features will be in place to limit the potential for pipeline failure. The integrity and performance of the pumping and pipeline systems will be monitored throughout the Project construction and operations phases to prevent the unintentional release of minewater to the environment. If any leaks or spills occur, clean-up will follow existing procedures in place at the Ekati Mine.	Mitigation / Environmental Management
13.3.2.2.1 Pathways With No Linkage	Dewatering of the diked area in Lac du Sauvage is expected to temporarily increase the lake water level and outflow. During construction, the largest changes to Lac du Sauvage would result from dewatering discharge. The dewatering phase modelling predicts an increase of up to 0.05 m in the water level in Lac du Sauvage compared to median baseline conditions, and an increase in the 2-year daily peak flood discharge of approximately 10% compared to baseline conditions (Section 8.5.3.2). Discharge flow rates will be managed to reduce the potential soil loss through erosion and associated changes to riparian habitat.	Mitigation /Environmental Management
13.3.2.2.1 Pathways With No Linkage	Back-flooding will be managed to minimize adverse effects in source waterbodies and downstream. Following back-flooding of the Jay Pit, baseline water levels in Lac du Sauvage are anticipated to be re- established. The riparian (shoreline) and littoral (shallow) areas around the perimeter of Lac du Sauvage at the re-established water elevation will be reclaimed where necessary to enable natural regrowth of riparian and aquatic vegetation. The reclamation work is expected to include localized repair of erosion, and re-vegetation of select areas with aquatic and riparian plants as necessary. This work will be based on experience gained through reclamation research of riparian areas and operations and closure of other areas of the Ekati Mine.	Environmental Management / Reclamation
13.3.2.2.1 Pathways With No Linkage	Environmental design features and mitigation will be implemented to limit loss of soils through erosion and to reduce the changes in the quantity and composition of wetland and riparian plant communities from dewatering and back-flooding the diked area in Lac du Sauvage. Lac du Sauvage water levels and Lac du Sauvage outflow discharges will be monitored, and pit back-flooding rates may be adjusted during low water years.	Design / Mitigation / Environmental Management
13.3.2.2.1 Pathways With No Linkage	Runoff and surface flows will be managed as part of dewatering and mine water management in the Mine Water Management Plan to limit introduction of sediment into receiving waterbodies. Where practical, natural drainage courses will be used to reduce the need for constructed ditches and diversion berms. Existing erosion and sediment control practices (e.g., silt curtains) already in place at the Ekati Mine will be implemented to limit the generation of sediments, metals, and nutrients that can cause changes in surface water quality. To reduce the potential for erosion in channels or backwatering due to higher than normal water flows and levels, natural drainage courses will be surveyed to evaluate capacity, and then modified, if required.	Mitigation/ Environmental Management
13.3.2.2.1 Pathways With No Linkage	Water quality monitoring will occur during the Project and water will not be released to the surrounding environment unless it meets discharge criteria. Areas of exposed soils may require localized repair of erosion and re-vegetation to stabilize and prevent erosion (BHP Billiton 2011). This work will be based on experience gained through operations and closure of other areas of the Ekati Mine, and is summarized in the ICRP.	Monitoring / Environmental Management
13.3.2.2.2 Secondary Pathways	Waste rock from the Jay Pit will be stored in the new Jay WRSA. The existing Ekati Waste Rock and Ore Storage Management Plan (WROMP) will be expanded to incorporate the Jay WRSA. Seepage quality will be monitored and reported to the Wek'ezhii Land and Water Board as part of the requirements set out in the Water Licence.	Monitoring/ Environmental Management
13.3.2.2.2 Secondary Pathways	The Jay WRSA will be constructed following existing WRSA practices to facilitate permafrost development. Any potentially acid-generating waste rock removed from the Jay Pit will be encapsulated for closure within a thermally-protective cover of non-PAG material (in this case 5 m of granite rock). The WRSA will be stabilized according to the methods described in the Ekati Mine ICRP and will focus on providing a thermally protective surface cover over PAG materials, providing a relatively flat upper surface that discourages snow accumulation, and providing for wildlife safety through caribou emergency egress ramps. The WRSA will then be monitored for long-term thermal performance as part of existing monitoring programs under the WROMP and Interim Closure and Reclamation Plan (ICRP).	Design / Monitoring / Environmental Management
13.3.2.2.2 Secondary Pathways	The presence of physical hazards on-site may result in an increased frequency of injury or mortality to wildlife. However, the implementation of environmental design features (Table 13.3-1) and the Wildlife Effects Monitoring Program (WEMP) are expected to decrease the risk to animals from physical hazards on-site. Environmental design features and mitigation will include the following:	Wildlife / Monitoring / Mitigation
	Blasting in the pit will be carefully planned and controlled to reduce the throw of materials.	
	At closure, the entire site area will be made safe for wildlife.	
13.3.2.2.2 Secondary Pathways	Wildlife deterrent actions will be also implemented by knowledgeable and trained personnel. The goal of these deterrents is to respond to wildlife situations using humane management methods in ways that will keep both humans and animals safe.	Wildlife / Environmental Management



Section of the DAR	Commitment Description	Subject/Component
13.3.2.2.2 Secondary Pathways	Monitoring of bird strikes will be completed along the Misery and Jay power lines. If areas with large numbers of bird strikes are identified during monitoring, Dominion Diamond will implement mitigation in these areas (e.g., installation of reflective spinners).	Wildlife / Monitoring
13.3.2.2.2 Secondary Pathways	The Misery and Jay power lines will incorporate perching deterrents on poles including cone-shaped pole caps and cross arm perch preventers to prevent large birds from perching and nesting on poles or on dangerous areas around phase conductors.	Wildlife / Environmental Management
13.3.2.2.2 Secondary Pathways	If vegetation clearing is required, activities will be managed to comply with the Species at Risk Act and the Migratory Birds Convention Act.	Wildlife /Environmental Management
13.3.2.2.2 Secondary Pathways	Environmental design features and mitigation have been incorporated into the Project to reduce potential effects from dust deposition (Table 13.3-1). For example, dust suppression will be applied as appropriate to roads, airstrip, and laydown areas and speed limits are established on all roads to reduce the production of dust.	Mitigation
13.3.2.2.2 Secondary Pathways	Dominion Diamond will implement spatially and temporally staged monitoring of the Bathurst caribou herd to track migratory movements via (i) satellite radiocollars, (ii) aerial reconnaissance surveys for caribou approaching the roads, and (iii) road surveys. The data collected during these monitoring activities will be used to test effects predictions and the success of proposed mitigation for increased traffic on the Misery Road.	Caribou / Monitoring
13.3.2.2.2 Secondary Pathways	Increased traffic on the Misery Road will be mitigated by the following:	Caribou / Environmental Management
	modified traffic patterns and road closures will be used as necessary to protect caribou and people; and,	
	 stockpiling ore to provide supply for processing during road closures. 	
13.3.2.2.2 Secondary Pathways	The following environmental design features and mitigation are expected to limit the risk from vehicle and aircraft collisions with wildlife:	Wildlife / Mitigation / Environmental
· · · · · · · · · · · · · · · · · · ·	 personnel arriving at or leaving the site will be transported by bus, which will reduce the amount of traffic between the airstrip and the accommodation complex; 	Management
	 all wildlife have the right-of-way: 	
	 the Project site will be designed to limit blind spots where possible to reduce the risk of accidental wildlife-human encounters; 	
	 speed limits will be established: and. 	
	 drivers will be warned when wildlife are moving through an area using signage and radio 	
13 3 2 2 2 Secondary Pathways	Environmental design features and mitigation strategies have been established to reduce the numbers of carnivores attracted to the Project (Table 13.3.1). These strategies are outlined in the WEMP and are	Wildlife / Monitoring / Environmental
10.0.2.2.2 000010dry 1 driwdys	similar to management practices and policies implemented at other diamond mines in the NWT and Nunavut:	Management
	Education and reinforcement of proper waste management practices to all workers and visitors to the site will be provided.	<u> </u>
	People will be educated on the risks associated with feeding wildlife and careless disposal of food garbage.	
	Separate bins will be located throughout facilities on-site for immediate sorting of domestic waste.	
	Food waste will transported directly to the incinerator storage area for incineration.	
	Incinerator ash from combustion of kitchen and office waste will be transported to the landfill.	
	Ongoing review of the efficiency of the waste management program will continue including improvement through adaptive management.	
13.4.5.2.2 Results	Dominion Diamond will implement spatially and temporally staged monitoring of the Bathurst caribou herd to track migratory movements via (i) satellite radiocollars. (ii) aerial reconnaissance surveys for caribou	Caribou / Monitoring
	approaching the roads, and (iii) road surveys. The data collected during these monitoring activities will be used to test effects predictions and the success of proposed mitigation for increased traffic on the Misery Road	
13.4.5.2.2 Results	Increased traffic on the Misery Road will be mitigated by:	Mitigation / Caribou
	 modified traffic patterns and road closures will be used as necessary to protect caribou and people; and, 	-
	 stockpiling ore to provide supply for processing during road closures. 	
13.6.2 Results	Dominion Diamond will use information made available by GNWT to monitor the Bathurst caribou herd to track migratory movements. The data collected during these monitoring activities will be used to test effects predictions and the success of proposed mitigation for increased traffic on the Misery Road. Changes in the distribution of caribou may alter wolverine and grizzly bear abundance and distribution (Gau et al. 2002; May et al. 2006). Modified traffic patterns and road closures will be used at the Project as necessary to limit effects to caribou, which will also enable the crossing of roads by grizzly bear and wolverine.	Caribou / Wildlife Monitoring
13.7 Follow-Up and Monitoring	Monitoring activities for wildlife currently within the scope of the Ekati Mine WEMP (ERM Rescan 2014a) will be applied to the Project (including construction, operation and post-closure). Wildlife monitoring completed as part of the existing Ekati Mine WEMP measures habitat loss, mine-related wildlife mortalities and interactions with site (including roads), mitigation and waste management effectiveness, pit-wall nesting by raptors, and a ZOI (ERM Rescan 2014a). The wildlife included in these programs are caribou, grizzly bear, wolverine, gray wolf, fox, raptors, waterbirds, and upland birds	Wildlife / Monitoring/ Environmental Management
Section 14	Key Line of Inquiry: Maximizing Benefits and Minimizing Impacts to Communities	
14.1.2.5 Temporal Boundaries	Dominion Diamond will continue to review expectations of Project effects and proposed management measures in the interim to 2015 and beyond.	Socio-economics / Management
14.1.3 Socio-Economic Management	The actions and commitments herein will evolve over time as the Project evolves, and will be regularly reviewed so that changes can be made adaptively.	Socio-economics / Management
14.1.3 Socio-Economic Management	The main objectives of socio-economic management for the Project are to:	Socio-economics / Management
	mitigate the negative effects and enhance the benefits (creating value) of the Project for all Project stakeholders:	
	• create opportunities for people in the North Slave Region, IBA communities, and the NWT more generally, to participate in the Project, thereby enhancing self-reliance, well-being and sustainability:	
	 establish a role for Dominion Diamond as an active participant in the sustainability of communities in the NWT: and. 	
	 maintain good will and good relations with people and their governments. 	



Section of the DAR	Commitment Description	Subject/Component
14.1.3.1 Existing Ekati Agreements	Dominion Diamond intends to maintain the existing IBAs in place with the Tłįchǫ Government, the Akaitcho Treaty 8 (Yellowknives Dene First Nations and Lutsel K'e Dene First Nation), the North Slave Métis Alliance (NSMA) and the Hamlet of Kugluktuk and Kitikmeot Inuit Association. The Socio-Economic Agreement between the Government of the Northwest Territories and the existing Ekati Mine will also be maintained.	Socio-economics / Management
14.1.3.2 Employment, Contracting and	It is Dominion Diamond's intention that employees working at the existing Ekati mine will be offered the opportunity to transfer to the Project once operations commence. These transfers will be subject to:	Socio-economics / Management
Procurement	 the terms and conditions of the existing IBAs; 	
	the timing of available positions at the Project;	
	 the ability of the transferring employees to fill the positions as they become available at the Project; and, 	
	• the need to maintain economically viable operations at both sites, i.e., the winding down of current mining operations at Ekati and the ramping up of Project operations.	
	There will likely be some new positions or openings due to attrition. Initiatives will be put in place to enhance employment opportunities through human resource policy and procedures as identified below.	
14.1.3.2 Employment, Contracting and	The Ekati SEA hiring priority targets will remain in place for the Project, with the following thresholds set for Northern and Northern Aboriginal employment:	Socio-economics / Management
Procurement	during construction: 33% Northern (of which 44% will be Northern Aboriginal);	
	during operations at less than 18,000 tpd: 62% Northern (of which 50% will be Northern Aboriginal); and,	
	during operations at greater than 18,000 tpd: 72% Northern (of which 50% will be Northern Aboriginal).	
	Dominion Diamond will strive to continue to meet hiring targets, and will employ management practices aimed at maximizing local participation in the Project, as described below.	
14.1.3.2 Employment, Contracting and Procurement	Dominion Diamond is committed to maximizing northern and northern Aboriginal employment and as such, will continue its focus on hiring from northern communities. To this end, Dominion Diamond will maintain Points of Hire or fly points in all IBA communities and as of June 1, 2015, Edmonton will no longer be a fly point community.	Socio-economics / Management
14.1.3.2 Employment, Contracting and Procurement	Dominion Diamond will work with community leaders to arrange community tours. Other community tours will be arranged as required. The purpose is to provide information on employment opportunities. As well, employment officers, in place in some IBA communities, will be kept abreast of these opportunities. Their role is to help identify candidates who have an interest in working at the mine, and to facilitate the application process to help eliminate any barriers associated with the online application process. In addition, to help make the hiring process more accessible, where possible, interviews with interested candidates will be conducted in IBA communities.	Socio-economics / Management
14.1.3.2 Employment, Contracting and Procurement	Dominion Diamond intends to continue Ekati's existing involvement in career fairs and high school programs aimed at informing students about mining employment. Building upon this, Dominion Diamond will explore the possibility of extending these outreach initiatives to younger age groups within the school system.	Socio-economics / Management
14.1.3.2 Employment, Contracting and Procurement	Dominion Diamond strives to contract locally where possible. Contractors are encouraged to adhere to the hiring targets identified in the Ekati SEA, and are required to track employment by IBA community, and by northern and Aboriginal identity. Dominion Diamond is committed to liaising with IBA community leadership to communicate contracting opportunities in an effort to maximize the use of local businesses.	Socio-economics / Management
14.1.3.2 Employment, Contracting and	In addition to the employment targets detailed above, the Ekati SEA identifies procurement targets as follows:	Socio-economics / Management
Procurement	During construction: 28% of goods and services are purchased from local (Northern) businesses.	
	During operations: 70% of goods and services are purchased from local (Northern) businesses.	
	As with contracting opportunities, Dominion Diamond will endeavour to communicate procurement needs and procedures to IBA communities and local suppliers.	
14.1.3.3 Workforce Management	While on site, employees will be housed in the existing Ekati camp.	Socio-economics / Management
14.1.3.3 Workforce Management	Since the transition of Ekati to Dominion Diamond, exit interviews have been conducted with outgoing employees, and have been (and will continue to be) tracked to identify employment issues and barriers to advancement. Monthly meetings between Human Resources and other department will occur to discuss feedback.	Socio-economics / Management
14.1.3.3 Workforce Management	Dominion Diamond supports community liaisons and community-based committees in IBA communities, and supports community-based committees. These groups can provide feedback to the mine regarding employee and broader community concerns and issues, and work with Dominion Diamond to develop solutions.	Socio-economics / Management
14.1.3.3 Workforce Management	Dominion Diamond is establishing an Aboriginal Awareness course for supervisors and employees in development roles. The aim of the course is to foster an environment of cultural awareness, and to avoid cross-cultural conflict. Additional training is also being considered for all employees, and may take the form of an online cultural awareness course.	Socio-economics / Management
14.1.3.4 Education and Training	Dominion Diamond will establish minimum training requirements for mining employment, as per the existing Ekati Mine practices. On a case-by-case basis, educational gap analyses will be conducted to consider promising candidates who do not meet the established minimum education requirements.	Socio-economics / Management
14.1.3.4 Education and Training	The Project will also reinstate the Ekati Workplace Learning Program (WLP). Employees identified as having educational gaps are referred to the WLP, through which they receive training pertinent to their position, and access to computer-based courses and individual tutoring. The WLP is optional, and matches one hour of the employee's personal time with an hour of paid employment in the pursuit of additional training pertinent to mining skill development.	Socio-economics / Management
14.1.3.4 Education and Training	Dominion Diamond supports external organizations, including the Mine Training Society (MTS), in the provision of pre-employment training in select programs (e.g., mineral processor trainee program). Dominion Diamond will continue to work with these organizations to facilitate placements, and where possible, will select candidates from organization programs for vacant roles at the trainee level. Pre-employment training is aimed at providing specific skill sets before full employment at the mine, and is focused on northerners.	Socio-economics / Management
14.1.3.4 Education and Training	Dominion Diamond intends to continue to support apprenticeship programs, and will work with the GNWT apprenticeship board to facilitate successful apprenticeships, appropriate registration, and program administration.	Socio-economics / Management
14.1.3.4 Education and Training	Dominion Diamond will continue to provide Ekati workforce development programs for all full-time employees. These include individual development plans to evaluate skill deficiencies, job area-specific progression plans to move employees into new roles, and a talent management program focused on key developmental positions for candidates with high potential. Dominion Diamond has also developed an operations progression plan, and is developing a site services plan specific to associated positions at the mine.	Socio-economics / Management



Section of the DAR	Commitment Description	Subject/Component
Section of the DAR 14.1.3.4 Education and Training	Commitment Description In addition to these development programs, Dominion Diamond intends to continue health and safety, skills upgrading, supervision, leadership and management training programs as follows: Supervisory Development Program (SDP) – Developed collaboratively with Ekati employees, and aimed at improving the strategic management skills of supervisors and high-potential employees, this program consists of six modules taken over a two-year period. The six modules are: Health and safety leadership; Problem solving and conflict resolution; Problem solving and conflict resolution; Coaching; Understanding our business; and, Leadership conversations. Ekati Leadership Program (ELP) – In existence since 2009, the ELP facilitates the growth and development of leadership skills through a series of three-day residential workshops designed to foster new ways of thinking and approaching leadership issues. The program was temporarily suspended in 2014 to allow for the transition to Dominion Diamond, but will be reinstated in 2015 with the development of Dominion Diamond, will be reinstated in 2015 with the development of Dominion Diamond, sut will be reinstated in 2015 with Aurora	Subject/Component Socio-economics / Management
14.1.3.4 Education and Training	College, and emphasises a northern perspective in leadership roles. Dominion Diamond expects to continue community investment in TK, and funding of the following TK programs: youth programs delivered at schools intended to develop traditional skills related to activity on the land; Gamèti Sewing Club; Gamèti Drumming and Singing Workshop; Goyatiko Language Society, Yellowknives Dene First Nation Traditional Knowledge Digitizing Project; Lutsel K'e Dene First Nation Traditional Knowledge Digitizing Project; Lutsel K'e Traditional Drumming and Singing Workshop; Lutsel K'e Tacditional Drumming and Singing Workshop; Lutsel K'e Tacditional Drumming and Singing Workshop; North Slave Métis Alliance, Genealogy Project; North Slave Métis Alliance, Genealogy Project; Tijcho Youth Summer Program including visiting heritage sites out on the land; Tijcho Government, Traditional Knowledge Digitizing Project; and, National Aboriginal Day; and	Traditional Knowledge
14.13.5 Health and Well-being	Dominion Diamond will maintain an Employee and Family Assistance Program (EFAP) open to employees and their families (i.e., spouses and children). The EFAP is administered by NorthStar Centre for Counselling, and provides counselling services pertaining to a number of topics including family and martial dynamics, addictions, interpersonal, work and career topics, financial management, and psychiatric and emotional issues.	Socio-economics / Management



Table 1E-1 Summary of Commitments Made by Do	ominion Diamond Ekati Corporation in the J	ay Project Developer's Assessment Report
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Section of the DAR	Commitment Description	Subject/Component
14.1.4.2 Pathway Screening Table 14.1-4 Pathway	Points of hire or fly points in all rural LSA communities.	Socio-economics / Management /
Screening	Source construction labour preferentially from point of hire or fly point communities (including Yellowknife).	Mitigation
	Maintain priority hiring and contracting for Northerners and Northern Aboriginals.	
	Transition existing Ekati operations workforce to the Project operations.	
	Providing training opportunities.	
	Working with local education authorities.	
	Support efforts to upgrade education.	
	Provide career counselling.	
	• Provide a first responder medical station at the accommodation camp facilities to meet workers' medical needs while at site, to limit the demand for governmental health facilities for work related injuries.	
	First aid training.	
	Driver training and enforcement of a driver code of conduct, to control speeds and encourage considerate driving.	
	Support Community Liaison Coordinator positions to work with communities throughout the Project.	
	Offer drug and alcohol programming and other counselling to employees and their immediate families.	
	Offer EFAP to employees and their immediate family members.	
	Use the existing Ekati camp to accommodate employees while on shift.	
	Liaise with other road users (e.g., the Diavik mine) on transportation schedule between Yellowknife and the Project.	
	Maintain production at existing levels to continue existing traffic volumes.	
	Mine waste will be processed and stored on-site.	
	Other industrial waste will be disposed of at approved landfills, and Dominion Diamond will pay all applicable disposal fees.	
	Employ mitigation measures detailed in the wildlife and habitat pathway analysis (DAR Section 13).	
	Employ mitigation measures detailed in the fish and fish habitat pathway analysis (DAR Section 9).	
	Employ mitigation measures for noise control (Appendix C3).	
	Where possible, minimize the above-ground visibility of waste rock piles.	
	Employ mitigation measures for noise control (Appendix C3).	
	Where possible, minimize the above-ground visibility of waste rock piles.	
	The Project will not be built within any parks or protected areas.	
14.5.1.4 Ekati Mine's Contributions to Education	Dominion Diamond aims to create a positive legacy that will remain with the territory long after the mine has closed, and has identified culture and education as focal points for its community development strategy.	Socio-economics / Management
14.7.3 Project Effects on Physical Infrastructure	The Project would not use ground transportation infrastructure in and around communities for the transportation of workers to and from site. Rather, air transportation from point of hire and fly point communities would be employed to transport Project personnel. This would require the use of existing air transportation infrastructure in point of hire and fly point communities. The Project would not, however, increase demand for air infrastructure beyond the existing demand, given that the operations workforce is expected to be similar to that of the existing Ekati Mine. The Project will pay all appropriate airport and airstrip fees, thereby supporting air infrastructure.	Socio-economics / Management
14.7.3 Project Effects on Physical Infrastructure	During construction, the Project would use both air transportation and the existing Tibbitt to Contwoyto winter road to transport workers, material and equipment to site. Construction activities would increase traffic on the winter road beyond levels associated with the existing Ekati Mine operation, potentially interacting with traffic associated with the Diavik Mine, and other users of the road. The Project will pay all appropriate tolls for use of the winter road, which contribute to upkeep and maintenance.	Socio-economics / Management
14.7.3 Project Effects on Physical Infrastructure	Waste would be trucked from the Project site to disposal and storage facilities. The Project would pay all applicable fees associated with waste disposal, and adhere to all regulations associated with the transportation of dangerous goods, the NWT Guidelines for the General Management of Hazardous Waste (GNWT 1998), and the NWT Guidelines for Waste Management (GNWT 2010).	Socio-economics / Environmental Management
14.9 Summary of Conclusions	The Project will continue to use local business wherever possible, and will maintain community contributions through the Ekati Mine's existing Impact Benefit Agreements.	Socio-economics / Management
14.9 Summary of Conclusions	Dominion Diamond will continue to hire northern workers for positions that come up at the mine during construction, and will move the existing Ekati Mine workforce to Project positions.	Socio-economics / Management
14.9 Summary of Conclusions	The Project will maintain existing points of hire and fly points in communities, and will continue to work towards meeting hiring targets identified in IBA and the Socio-Economic Agreement with the Government of the Northwest Territories.	Socio-economics / Management
14.9 Summary of Conclusions	The Project is expected to continue some level of demand for a trained labour force, and will maintain community education contributions to IBA communities. On the job Project training and apprenticeship programs will continue to build capacity in the NWT labour force, maximizing the ability of trained workers to transition to other employment opportunities as the mining industry wanes over the next two decades.	Socio-economics / Management



Section of the DAR	Commitment Description	Subject/Component
Section 15	Cultural Aspects	
15.3.1 Review of Mitigation Measures	In addition, Dominion Diamond has developed an Ekati Mine Engagement Plan (Dominion Diamond 2014) to guide engagement activities for mine development and operations with affected Aboriginal groups. Examples of engagement for ongoing operations include the following:	Management/ Engagement / Socio- economics/
	quarterly meetings between Dominion Diamond senior management and community leadership and members;	
	community presentations, workshops and site visits on specific projects (such as the Jay Project);	
	annual community presentations of environmental monitoring information;	
	annual community presentations of socio-economic monitoring information; and,	
	Elder/youth site visits for environmental monitoring programs (typically annual).	
15.3.1 Review of Mitigation Measures	This engagement facilitates the incorporation of TK into environmental monitoring and management plans, which may assist in mitigating effects to TLU. Dominion Diamond currently has the following monitoring plans and programs, which will be extended to include the Project:	Traditional Knowledge/ Monitoring
	Wildlife Effects Monitoring Program (WEMP);	
	Air Quality Management and Monitoring Program (AQMP); and,	
	Aquatic Effects Monitoring Program (AEMP).	
Table 15.3-1 Potential Pathways for Effects on	The Project footprint disturbance will be limited to the extent possible, while maintaining safe construction and operation practices.	Design/ Mitigation
Traditional Land Use	The site access road route will follow existing roads and/or trails to the extent possible, to limit land clearing.	
	The new access road will be as narrow as possible, while maintaining safe construction and operation practices.	
Table 15.3-1 Potential Pathways for Effects on	The Project maximizes the use of the existing infrastructure to reduce the environmental footprint as much as possible.	Design/ Mitigation/ Environmental
Traditional Land Use	The esker will be sloped to allow for continued use by caribou.	Management/ Monitoring
	• Siting and construction of the Project will be planned to avoid environmentally sensitive areas (e.g., critical wildlife habitat, rare plants and wildlife species, and wetlands) as much as possible.	
	Vegetation clearing will take place outside of the migratory bird season, as practical.	
	• If site clearing activities are completed during the migratory bird breeding season, then vegetation removal will be completed before nesting season, or nest searches will be completed before construction.	
	If nests are found during nest searches, mitigation will be applied to avoid incidental take of nesting individuals.	
	Wildlife will be actively deterred from areas of risk.	
	The WEMP implemented at the Ekati Mine will include the Jay Project.	
	Animals will be deterred from entering the diked area where most fly rock will occur (until pit is too deep for escape of fly rock).	
	Additional mitigation measures as described in the Caribou KLOI and Wildlife and Wildlife Habitat SON (Sections 12 and 13).	
Table 15.3-1 Potential Pathways for Effects on	The Project footprint disturbance area will be limited to the extent practical.	Design/ Mitigation/ Environmental
Traditional Land Use	A diversion channel will be constructed to maintain habitat corridors between Lac du Sauvage and waterbodies in the small contributing sub-basins around the diked area.	Management/ Engagement
	A fish-out will occur according to Fisheries and Oceans Canada (DFO) guidance, and with engagement of the Ekati Mine Impact Benefit Agreement (IBA) groups.	
	An offsetting plan will be developed with DFO and with engagement of the Ekati Mine IBA groups.	
	The road route alignment will minimize stream crossings and avoid sensitive habitat as feasible.	
	Culverts will be designed to allow for fish passage where appropriate.	
	Additional mitigation measures as described in the Fish and Fish Habitat KLOI (Section 9).	
Table 15.3-1 Potential Pathways for Effects on	The Project footprint disturbance will be limited to the extent possible, while maintaining safe construction and operation practices.	Design/ Mitigation/ Environmental
Traditional Land Use	The site access road route will follow existing roads and/or trails to the extent possible, to limit land clearing.	Management
	Banks and vegetated areas will be stabilized, if disturbed.	
	Reclamation activities will continue throughout the life of the mine.	
	Additional mitigation measures as described in the Vegetation SON (Section 11).	
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	The site access road will not be available to the public.	Mitigation / Environmental Management
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	Regular involvement with, meetings, updating, and communication of the results of monitoring programs to potentially affected Aboriginal communities.	Engagement
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	Mitigations as described in the Water Quality and Quantity KLOI (Section 8).	Mitigation



Section of the DAR	Commitment Description	Subject/Component
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	 The AEMP implemented at the Ekati Mine will include the Jay Project. Diversions will be designed to take into account fish movement. 	Monitoring/ Environmental Management/ Engagement
	A Lac du Sauvage Dewatering Plan will be prepared for the WLWB that will include flow rates and locations.	
	Direct discharge flow rates will be developed and maintained such that there are no adverse effects to fish habitat.	
	During pumping of water from areas that contain fish, appropriately sized fish screens that meet DFO guidelines will be fitted to pumps to limit fish impingement and entrainment.	
	A Fish-Out Plan will be developed and the fish-out will occur according to DFO guidance and with engagement of the Ekati Mine IBA groups.	
	Other mitigations as described in the Fish and Fish habitat KLOI (Section 9).	
Table 15.3-1 Potential Pathways for Effects on	A Lac du Sauvage Dewatering Plan will be prepared for the WLWB that will include flow rates and locations.	Environmental Management /
Traditional Land Use	Reduced pumping rates will be implemented during low-flow periods to preserve downstream flow levels.	Mitigation
	Other mitigations as described in the Water Quantity and Quantity KLOI (Section 8).	
Table 15.3-1 Potential Pathways for Effects on	The WEMP implemented at the Ekati Mine will include the Jay Project.	Monitoring / Environmental
Traditional Land Use	Project activities will be completed in accordance with the Migratory Bird Convention Act.	Management / Mitigation/ Wildlife
	• If lake water level increases are to occur during migratory bird breeding season, then vegetation removal will be completed before nesting season, or nest searches will be completed before construction.	
	If nests are found during nest searches, mitigation will be applied to avoid incidental take of nesting individuals.	
	Habitat changes will be monitored as part of the WEMP.	
	Additional mitigations as described in the Caribou KLOI and Wildlife and Wildlife Habitat SON (Sections 12 and 13).	
Table 15.3-1 Potential Pathways for Effects on	Lake shorelines will be assessed for erosion potential, and mitigation will be applied for areas identified with high potential for erosion/generation of suspended sediments/contaminant release.	Monitoring / Environmental
Traditional Land Use	The AEMP implemented at the Ekati Mine will include the Jay Project.	Management / Mitigation
	Additional mitigations as described in the Vegetation SON (Section 11).	
Table 15.3-1 Potential Pathways for Effects on	Operational discharge will meet the discharge criteria for water quality.	Monitoring / Environmental
Traditional Land Use	Discharge water will be regularly sampled and monitored as part of the Water Licence Surveillance Network Program.	Management / Mitigation / Engagement
	The AEMP implemented at the Ekati Mine will include the Jay Project.	
	Regular involvement with, meetings, updating, and communication of the results of the AEMP to potentially affected Aboriginal communities.	
Table 15.3-1 Potential Pathways for Effects on	The WEMP implemented at the Ekati Mine will include the Jay Project.	Monitoring / Environmental
Traditional Land Use	Periodic review of the WEMP and engagement with potentially affected Aboriginal groups.	Management / Mitigation/ Wildlife/
	Construction of caribou ramps and crossings at strategic points along the Misery Road.	Caribou
	Road closures during peak caribou migration throughout the Ekati Mine site.	
	Use of truck convoys with wildlife monitor escorts to reduce periods of traffic along the roads.	
	Vehicles will be restricted to designated roads and prepared work areas (recreational use of off-road vehicles is prohibited).	
	Hazards will be fenced to prevent wildlife interaction.	
	Continued use of measures currently in place to minimize human-wildlife interactions. Wildlife will be actively deterred from areas of risk.	
	Additional mitigation measures as described in the Caribou KLOI and Wildlife and Wildlife Habitat SON (Sections 12 and 13).	
Table 15.3-1 Potential Pathways for Effects on	The AEMP implemented at the Ekati Mine will include the Jay Project.	Monitoring / Environmental
Traditional Land Use	In-stream works will either be avoided or limited to when watercourses are not flowing, where possible.	Management / Mitigation / Fish
	Additional mitigations measures as described in the Fish and Fish Habitat KLOI (Section 9).	
Table 15.3-1 Potential Pathways for Effects on	Dust suppression will be applied as appropriate to roads, the airstrip, and laydown areas.	Mitigation / Environmental
Traditional Land Use	 Additional mitigation measures as described in the Vegetation SON (Section 11). 	Management / Vegetation
Table 15.3-1 Potential Pathways for Effects on	The AQMP implemented at the Ekati Mine will include the Jay Project	Monitoring / Environmental
Traditional Land Use	 Dust suppression measures will be applied to haulage roads, the airstrip, and laydown areas, as appropriate. 	Management / Mitigation
	 Speed limits will be e established and enforced on all roads to reduce the production of dust 	
	Equipment will be regularly maintained.	
Table 15.3-1 Potential Pathways for Effects on	Mitigation measures as described in the Maximizing Benefits and Minimizing Impacts KLOL (Section 14)	Socio-economics Mitigation/
Traditional Land Use		Management
Table 15.3-1 Potential Pathways for Effects on	Regular involvement with, meetings, updating, and communication of the results of monitoring programs to potentially affected Aboriginal communities.	Monitoring/ Engagement
Traditional Land Use		



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Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	Disturbed areas will be reclaimed and the surface stabilized.	Reclamation
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	 Final reclamation will be completed so that the landscape is safe for wildlife use. Additional mitigation measures as described in the Caribou KLOI and Wildlife and Wildlife Habitat SON (Sections 12 and 13). 	Reclamation/ Mitigation
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	 A closure plan for back-flooding dewatering areas will be developed. Natural, local water will be used to refill dewatering areas. Water quality will be monitored during the back-flooding period. Back-flooding will be managed so that there will be no measurable effects to fish habitat at downstream locations in the Coppermine River. Surface water will be diverted to the pit and dewatered area at a rate that does not significantly alter downstream flow rates. During pumping of water from areas that contain fish, appropriately sized fish screens that meet DFO guidelines will be fitted to pumps to limit fish impingement and entrainment. Additional mitigation measures as described in the Fish and Fish Habitat KLOI (Section 9). 	Reclamation / Monitoring / Environmental Management / Fish
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	 Reclamation objectives will reflect the local native vegetation communities. Additional mitigation measures as described in the Vegetation SON (Section 11). 	Reclamation/ Vegetation
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	 At closure, natural water levels in Lac du Sauvage will be re-established. Additional mitigation measures as described in the Water Quality and Quantity KLOI (Section 8). 	Reclamation/ Water Quality and Quantity
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	 Water quality in the back-flooded area will meet discharge criteria before the dike is breached to allow a reconnection with the main Lac du Sauvage basin. Regular involvement in, meetings, updating, and communication of the results of monitoring programs to potentially affected Aboriginal communities. 	Reclamation/ Engagement
Mitigation measures as described in the Maximizing Benefits and Minimizing Impacts KLOI (Section 14).	Mitigation measures as described in the Maximizing Benefits and Minimizing Impacts KLOI (Section 14).	Mitigation/ Management Socio- economics
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	 Involvement of potentially affected Aboriginal groups in monitoring programs. Regular involvement with, meetings, updating, and communication of the results of monitoring plans to potentially affected Aboriginal groups. 	Monitoring/ Engagement
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	 A Spill Contingency Plan is in place for the Ekati Mine and will be expanded to include the Jay Project. Equipment will be regularly maintained. Drip trays and/or absorbent pads will be used during servicing and refuelling of equipment. Hazardous substances will be stored and handled on site in accordance with applicable regulations. Fuel will be stored at central bulk fuel farms and fuel tanks will be housed within bermed areas. The Project will follow the Ekati Mine's standard policies in the event of a spill; spill response training is provided and updated. Hydrocarbon-impacted material will continue to be handled in accordance with the approved management plan. 	Mitigation / Environmental Management
Table 15.3-1 Potential Pathways for Effects on Traditional Land Use	 A Spill Contingency Plan is in place for the Ekati Mine. Regular involvement with, meetings, updating, and communication of the results of monitoring plans to potential affected Aboriginal groups. 	Mitigation / Environmental Management / Engagement
Table 15.3-2 Potential Pathways for Effects on Heritage Resources	 Archaeology assessments have been completed at the proposed Project site and documentation is ongoing. Management practices for the avoidance or preservation of archaeological and/or heritage materials discovered during mine activities are in place at the Ekati Mine. Engagement of the Ekati Mine IBA groups. Provide awareness training and a manual for recognizing heritage resources to all staff and contractors. Monitor condition of known heritage resource sites near the Project footprint. Complete more in-depth mitigation strategies if an avoidance mitigation strategy cannot be implemented. 	Heritage Resources/ Management/ Engagement/ Monitoring
15.3.2.2.2 Secondary Pathways	The proposed Jay WRSA will impact heritage resources sites LdNs-52 and LdNs-53. These sites are currently assessed as having low archaeological significance, and the sites will be mitigated using the appropriate level of scientific data recovery.	Heritage Resources/ Mitigation
15.4.1.1.1 Changes in Access to Preferred Land Use or Culturally Important Sites and Areas	The only new access route associated with the Jay Project will be the Jay Access Road. This road will not be available for use by the public, and will not allow for any increased access into the area for harvesting.	Design/ Environmental Management
15.4.1.1.1 Changes in Access to Preferred Land Use or Culturally Important Sites and Areas	These effects to flows are expected to last no longer than four years (the closure phase), and will be monitored. Pumping rates from Lac du Sauvage are scheduled to be reduced during periods of low flow (November to May) when the lakes are iced over. This reduction will assist in reducing potential impacts to navigability during winter periods. During other periods of low flow reduced pumping rates will be enacted to mitigate effects.	Mitigation/ Monitoring/ Environmental Management
15.4.1.1.4 Social and Economic Factors Affecting	Current Ekati Mine employees will be moved to staff the Project operations, thereby extending the existing employment conditions from 2019 to 2029. A small increase in job development will be associated with Project construction.	Socio-economics



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15.4.1.1.4 Social and Economic Factors Affecting	To help mitigate this effect, Dominion Diamond intends to provide retrenchment programs to employees to provide training and to support employees who are transitioning out of Project employment into other opportunities within the NWT.	Socio-economics
15.4.1.1.5 Increased Concerns Regarding Human Ecological Health	Dominion Diamond intends to mitigate this concern through the involvement of potentially affected Aboriginal groups in their monitoring programs (i.e., WEMP, AEMP, AQMP) and through the communication of the results of these monitoring programs to each community through meetings and other engagement opportunities.	Monitoring/ Engagement
15.4.1.2.1 Effects on Traditional Wildlife Harvesting	The expansion of Bathurst herd monitoring programs during migration periods are expected to identify concentrations and movements of animals that may interact with the road. Stockpiling of ore and the use of road trains and road closures will provide opportunities for migration across the road as needed to reduce the barrier effect and prevent a decrease in connectivity of the herd.	Monitoring/ Environmental Management
15.4.1.2.2 Effects on Traditional Fishing	Fish located within the diked and dewatered area will be removed through a fish-out program, which will be organized and carried out with the involvement of the potentially affected Aboriginal groups. This program is intended to minimize the wastage of fish caused by the dewatering of isolated portions of Lac du Sauvage	Fish and Fish Habitat/ Engagement
15.4.1.2.2 Effects on Traditional Fishing	Where the Project footprint results in habitat loss, fish habitat of equivalent or higher productive capacity will be developed.	Fish and Fish Habitat
15.4.1.2.2 Effects on Traditional Fishing	At closure, the dewatered portion of Lac du Sauvage will be back-flooded. Once the back-flooded water meets water quality thresholds, the dikes, diversion channels, and other associated infrastructure will be decommissioned and the back-flooded section will be reconnected to the undisturbed portions of Lac du Sauvage.	Reclamation
15.4.1.2.2 Effects on Traditional Fishing	No change in road access is expected due to the Project, because the Jay Access road will not be accessible to the public.	Design
15.4.1.2.3 Effects on the Traditional Plant Harvesting	Most of the area disturbed by the Project is expected to be reclaimed. It is not known what the landscape will look like in the future once re-vegetated. However, the reclamation goal is to return the Ekati Mine site to self-sustaining ecosystems that are compatible with a healthy environment, human activities, and the surrounding environment.	Reclamation
15.4.3 Heritage Management Plan	This Plan has been prepared to a level appropriate for inclusion in the Project Environmental Assessment. The Plan will be reviewed and updated regularly as the Project proceeds into detailed design, construction, operations, and closure.	Heritage Resources
15.4.3.2 Dominion Diamonds Heritage Resources Policies and Procedures	Awareness training will be completed by staff and contractors involved with Project construction, operations, and exploration, or field programs that are off the mine site. The training will include basic information about what archaeological resources in the Heritage BSA look like, that these resources are protected by law, and what actions need to be taken should Project activities come into conflict with a heritage site. The actions to be taken include immediately contacting Supervisors, who will immediately stop work located near the possible heritage site until the situation is clarified by the Project archaeologist in consultation with the PWNHC, GNWT. Previous IBA agreements identify that should an archaeological site be verified, notification would be sent to the Minister, the GNWT and affected Aboriginal Peoples of the presence of the archaeological site (Bussey 2000).	Heritage Resources
15.4.3.2 Dominion Diamonds Heritage Resources Policies and Procedures	Overview assessments will be completed to assist in the early planning stages of infrastructure, and AIAs will be conducted for all identified locations with moderate to high archaeological potential that are located within the proposed footprint of mine infrastructure. Depending on the results of the AIA, mitigation of archaeological sites may be completed. Mitigation in archaeological terms includes avoiding sites or scientific documentation of sites. Where possible, mine infrastructure will be placed to avoid known archaeological sites. Where avoidance or protection is not possible, scientific documentation of heritage resources will be implemented.	Heritage Resources / Mitigation
15.4.3.2 Dominion Diamonds Heritage Resources Policies and Procedures	Heritage resource sites will be monitored when Project activities occur near heritage resources either during or after Project activities have taken place.	Heritage Resources / Monitoring
15.4.3.2 Dominion Diamonds Heritage Resources Policies and Procedures	The Project archaeologist, in consultation with PWNHC, will determine if heritage avoidance strategies are working. If avoidance strategies are not working as evidenced by Project activities infringing on the 150- m buffer, or damage to a heritage site, the heritage sites may be mitigated using scientific documentation.	Heritage Resources/ Mitigation
15.4.3.4.3 Predication Confidence and Uncertainty	Dominion Diamond compliance with the Heritage Resource Management Plan (Section 15.4.3) will result in mitigated impacts to the heritage resources.	Heritage Resources/ Mitigation
15.5 Follow-up and Monitoring	As a result, Dominion Diamond will meet with potentially affected Aboriginal groups about establishing a monitoring program that tracks the avoidance by traditional land users of the Ekati area. A potential goal of such a program, dependent upon the engagement with potentially affected Aboriginal communities, would be to track the existing TLU of the general Ekati area, any changes resulting from the Project development, and the underlying reasons behind any changes observed.	Traditional Land Use / Monitoring /Engagement
15.5 Follow-up and Monitoring	Dominion Diamond currently has existing monitoring programs in place to track effects to wildlife, aquatics, and air quality. Dominion Diamond will discuss with potentially affected Aboriginal groups ways for community members to be involved in these programs. The goal of this involvement is intended to assist in mitigating residual concerns about effects on traditionally harvested resources, and human and ecological health effects in the general Ekati area.	Monitoring/ Traditional Land Use / Engagement
15.5 Follow-up and Monitoring	For this reason, Dominion Diamond will support potentially affected Aboriginal communities' participation in meaningful programs designed to assist in the retention of their cultural connection to the land. Examples of potential programs include the following:	Reclamation/ Engagement
	 collaboration between Dominion Diamond and potentially affected Aboriginal groups in reclamation design and implementation so that reclamation occurs in a way that is consistent with the needs of potentially affected Aboriginal groups; 	
	community ceremonies at Project milestones, such as initiation and decommissioning; and,	
	cultural gatherings and camps in the general Ekati area.	
15.5.1 Heritage Resources Follow-up and Monitoring	Heritage resources sites will be monitored when Project activities occur in close proximity (within/adjacent to a 150-m buffer around heritage sites).	Heritage Resources
15.5.1 Heritage Resources Follow-up and Monitoring	The Project archaeologist, in consultation with PWNHC, will determine if heritage avoidance strategies are working. If avoidance strategies are not working as evidenced by Project activities infringing on the 150- m buffer, or damage to a heritage site, the heritage sites will be mitigated using scientific documentation.	Heritage Resources / Mitigation
16	Effects from the Environment on the Project	
Effects from the Environment on the Project	Current and ongoing monitoring of engineered structures will be used to determine the effectiveness and success of Project designs and mitigation, and as input for adaptive management (Section 10.4).	Design/ Mitigation



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17	Cumulative Effects Summary	
Water Quality and Quantity 17.4	Project activities will be managed to protect source water and downstream areas against adverse effects, such as, channel scouring and erosion of shorelines. This includes actively managing pumped dewatering flows to accommodate natural changes through wet or dry conditions, and completing back-flooding in accordance to approved withdrawal rates from source lakes. Mitigation efforts will focus on limiting potential adverse effects on fish habitat due to Project activities, as well as reducing cumulative effects to source lakes and downstream watersheds.	Surface Hydrology/ Fish Habitat/ Environmental Management
Water Quality and Quantity 17.4	Future modelling will be completed during detailed design to indicate whether reduced transfer rates will be required at certain times to limit impacts on the downstream hydrological regime.	Surface Hydrology
Fish and Fish Habitat 17.5	Dominion Diamond will engage with Fisheries and Oceans Canada and local Aboriginal communities during the permitting phase of the Project on the development of an offsetting plan to counterbalance for losses in fish habitat productivity.	Engagement/Fish and Fish Habitat
Fish and Fish Habitat 17.5	The detailed fish-out plan will be developed thorough engagement of local Aboriginal groups and Fisheries and Oceans Canada.	Fish-out
Fish and Fish Habitat 17.5	During anticipated low flow time periods, such as winter months, pumping rates may be reduced and pumping rates may be managed, which will further reduce downstream cumulative effects to the Lac du Sauvage and Lac de Gras outlets.	Fish and Fish Habitat/ Surface Hydrology
Socio-Economics 17.10.1	Project training will continue to build capacity in the labour force, thereby strengthening the NWT population's ability to participate in the labour force.	Socio-economics
Means to Reduce or Avoid Predicted Cumulative Effects 17.12	Dominion Diamond is committed to keeping the footprint as small as practical to ensure safe operations of the mine and limit disturbance to the natural vegetation communities.	Environmental Design
Means to Reduce or Avoid Predicted Cumulative Effects 17.12	Dominion Diamond will implement monitoring of the Bathurst caribou herd to track migratory movements via (i) satellite radio-collars (relying on information provided by GNWT), (ii) aerial reconnaissance surveys for caribou approaching the roads, and (iii) road surveys.	Caribou/Monitoring
Means to Reduce or Avoid Predicted Cumulative Effects 17.12	The data collected during these monitoring activities will be used to test effects predictions and the success of proposed mitigation for increased traffic on the Misery Road as part of determining the cumulative effects of the project on caribou.	Caribou/Monitoring
Means to Reduce or Avoid Predicted Cumulative Effects 17.12	In addition, Dominion Diamond funds the Independent Environmental Monitoring Agency in accordance with the Environmental Agreement.	Monitoring/Management
Means to Reduce or Avoid Predicted Cumulative Effects 17.12	Data collected as part of the mine water monitoring program will be used to assess the need for adaptive management should trends in mine water quantity and quality differ from expectations.	Monitoring
Means to Reduce or Avoid Predicted Cumulative Effects 17.12	Mine water sources and effluent will be monitored through internal programs and the expansion of the Water Licence Surveillance Network Program.	Monitoring
Means to Reduce or Avoid Predicted Cumulative Effects 17.12	The receiving environment will be monitored through the expansion of the Water Licence Aquatic Effects Monitoring Program (AEMP). The AEMP will be designed to monitor effects on the aquatic environment related to changes in hydrology, surface water quality, sediment quality, plankton, benthic invertebrates and fish (fish health, fish tissue chemistry) (Appendix 9C). Sites will be identified to be representative of near-field and far-field conditions, and consideration of potential cumulative effects associated with the Ekati and Diavik mines. The Ekati Mine Aquatic Response Framework will also be expanded to incorporate the Project. This framework provides a mechanism for ensuring review of monitoring information against pre-defined thresholds, and implementation of adaptive management response actions as appropriate.	Monitoring
Means to Reduce or Avoid Predicted Cumulative Effects 17.12	As described in the Ekati Mine Interim Closure and Reclamation Plan (ICRP), back-flooding of pits at the Ekati Mine will be completed in accordance with approved withdrawal rates to protect source water and downstream areas against adverse effects. Dominion Diamond will also manage water withdrawals to limit cumulative effects on Lac de Gras in terms of water level and local hydrological regime, and potential effects on fish habitat in Lac de Gras and downstream in the Coppermine River.	Closure and Reclamation/Environmental Management
Means to Reduce or Avoid Predicted Cumulative Effects 17.12	Dominion Diamond will continue to maximize benefits via employment and employee support. Where there is potential for a negative socio-economic effect, the Project will employ environmental design and socio-economic management practices aimed at reducing or avoiding the effect.	Socio-economics
Section 18	Summary and Conclusions	
18.3 Project Summary	The existing Ekati Mine environmental monitoring, management, and mitigation programs will be expanded to incorporate the activities proposed for the Project.	Monitoring/Environmental Management
18.4 Engagement Summary	Dominion Diamond is committed to engaging with potentially affected communities and stakeholders in an open, timely, and comprehensive manner.	Engagement
18.4 Engagement Summary	Specific engagement meetings were also held with, and will continue to be held with, regulators, government departments, and the Independent Environmental Monitoring Agency.	Engagement
18.4 Engagement Summary	Ongoing engagement will include participation in the Environmental Assessment (EA) process, including responses to information requests, preparations of reports and presentations, and participation in community, technical, and MVRB hearings.	Engagement
18.4 Engagement Summary	Dominion Diamond will also continue with its current practice of quarterly engagement meetings and additional engagement, as required, through written exchanges, public meetings, and face-to-face meetings and workshops to discuss specific issues of interest, and to maintain two-way dialogue about the Project with the affected parties.	Engagement
18.5 Air Quality	A human health risk assessment will be completed to evaluate the potential for adverse health effects to people associated with exposure to chemicals from the Project. No impacts are expected for human health.	Air Quality/ Health
18.5 Air Quality	Monitoring programs are planned that will verify predictions and identify unanticipated effects, which enables adaptive management actions if necessary. Monitoring can include compliance inspections, environmental monitoring or follow-up monitoring, all of which may be implemented during the development of the Project. Dominion Diamond will expand the Ekati Mine Air Quality Management and Monitoring Plan to as appropriate to validate that the predicted concentrations from the Project are conservative, and to assist in managing Project emissions at a reasonable level.	Monitoring/ Environmental Management /Adaptive Management
18.6 Water Quality and Quantity	Construction dewatering, operational water usage, and back-flooding of the pits and diked area during closure will be carried out in a manner that protects source water and downstream areas against adverse effects.	Environmental Management



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18.6 Water Quality and Quantity	Monitoring of water quality on the mine site and in the receiving environment is planned. The existing Aquatic Effects Monitoring Program for the Ekati Mine and other programs will be updated and amended to include the Project.	Monitoring
18.7 Fish and Fish Habitat	Dominion Diamond will work with Fisheries and Oceans Canada and local Aboriginal communities on developing an offsetting plan to counterbalance for losses in fish habitat productivity.	Fish and Fish Habitat / Engagement
18.7 Fish and Fish Habitat	Before the isolated portion of Lac du Sauvage is dewatered, a fish-out plan will be developed through engagement with local Aboriginal groups and Fisheries and Oceans Canada.	Fish and Fish Habitat / Engagement
18.7 Fish and Fish Habitat	The Ekati Mine Aquatic Effects Monitoring Program will be expanded to monitor Project effects to the aquatic environment related to changes in surface hydrology, water quality, sediment quality, aquatic life other than fish (plankton and benthic invertebrates), and fish (fish health, fish tissue chemistry). The accompanying Ekati Mine Aquatic Response Framework will also be expanded to provide pre-defined 'early-warning' levels that will prompt adaptive management responses if necessary.	Monitoring/ Adaptive Management
18.8 Terrain	The scope also includes plans to mitigate and monitor against impacts to terrain, including:	Mitigation/ Environmental Management
	erosion control measures;	
	 prevention of permafrost degradation or growth encouragement; and, 	
	 how the geotechnical stability of the mine rock management area, and the system of dikes and dams will be monitored, and for how long. 	
18.8 Terrain	A minimum 30-m setback distance from nearest streams and waterbodies will be used, and Lac du Sauvage is approximately 100 m away from the proposed WRSA.	Environmental Design
18.11 Wildlife and Wildlife Habitat	An ecological risk assessment will be completed to evaluate the potential for adverse effects to animal health associated with exposure to chemicals from the Project. No health impacts are expected for caribou and other wildlife	Wildlife
18.12 Socio-Economics	The Project will continue to use local business wherever possible, and will maintain community contributions through the Ekati Mine's existing IBAs.	Socio-economics
18.12 Socio-Economics	Dominion Diamond will continue to hire northern workers for positions that come up at the mine during construction, and will move the existing Ekati Mine workforce to Project positions. The Project will maintain existing point of hire and fly point communities, and will continue to work towards meeting hiring targets identified in IBA's and the Socio-Economic Agreement with the Government of the Northwest Territories.	Socio-economics
18.12 Socio-Economics	The Project is expected to continue demand for a trained labour force through existing employment and employment opportunities made available through attrition, and will maintain community education contributions to IBA communities. On the job Project training and apprenticeship programs will continue to build capacity in the NWT labour force, maximizing the ability of trained workers to transition to other employment opportunities as the mining industry wanes over the next two decades.	Socio-economics
18.13 Cultural Aspects	Regarding Heritage Resources, archaeological investigations identified eight sites within 500 m of the Project footprint. Two of these sites (a lithic scatter/camp and cache/stone feature) were newly identified in 2014, and assessed as having low archaeological significance. Further mitigation was recommended for the lithic scatter/camp, while no further work was recommended for the cache/stone feature. These recommendations are currently undergoing governmental review with the Prince of Wales Northern Heritage Centre. All other previously identified sites have already been mitigated or will be avoided during Project construction.	Heritage Resources / Mitigation
18.13 Cultural Aspects	In an effort to mitigate potential effects on TLU, Dominion Diamond currently has existing monitoring programs in place to track effects to wildlife, aquatics, and air quality. Dominion Diamond will meet with potentially affected Aboriginal groups and discuss ways for community members to be involved in these programs. Dominion Diamond will also meet with Aboriginal groups to discuss the potential for additional monitoring programs to track trends associated with TLU in the general Ekati Mine area.	Engagement/ Monitoring